

A PROJECT ON OSHADHI KOSHA



Kalpatharu Research Academy Publication

Chief Editor: Daivajna K.N. Somayaji

VRKSHAYURVEDA

(Excerpt from Śārṅgadhara-Saṁhitā)

Edited by

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PREFACE

The Kalpatharu Research Academy, Bangalore, has launched on a new project entitled 'Oshadhi Kosha'. It relates to the traditional wisdom concerning the medicinal uses of plants and trees. A glossary of medicinal plants, which is not only illustrated but authentic, has also been planned; the valuable section which deals with the care and uses of plants in the well-known compendium, *Sārngadhara-Paddhati*, (sometimes also called *Sārngadhara-Saṁhitā*) has been edited and printed here, with translation in English by Vidyāṅkāra Prof. S.K. Rāmachandra Rao.

The subject of *Āyurveda* is well within the area of specialization chosen by the Kalpatharu Research Academy; and some books on the subject have already been published. *Āyurveda* has been of immense importance in Indian culture; and the Academy, committed as it is for the recovery and preservation of the significant aspects of our culture, has planned publications of source-materials of *Ayurveda*, relating to medicinal herbs, pharmaceutical preparations, theoretical considerations and therapeutic details.

The present publication deals not only with the plants and trees recognised in *Ayurveda* for medicinal purposes, but also with the plants and trees which are fit for private gardens and public parks. The work in this sense is an unusual one, while also being highly useful.

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It has been brought out after our scholars have carefully edited the text, amended the existing English translation and added a valuable introduction.

We are grateful to Vidyāṅkara Prof.S.K.Ramachandra Rao the well-known authority in Indological subjects and Shri Yellappa Reddy, Chief Conservator of Forests, Government of Karnataka, for having kindly prepared the matter for publication.

We also acknowledge the assistance provided by Dr. R.K.Perthy, Director General, National Archives of India, New Delhi.

The Payonidhi printers is to be thanked for having expedited the printing of this work.

14-April-93.

Soura-Ugadi.
Bangalore.

Daivajna K.N. Somayaji

Chief Editor and Director,

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INTRODUCTION

The Indian Research Institute of Calcutta undertook to publish ancient and medieval texts pertaining to what it called "Indian positive Sciences". As its first publication appeared a Sanskrit treatise on Arbori-horticulture, *Upavana-vinoda* in 1935. The text was Śārngadhāra's encyclopaedic work on this subject. The renowned scholar Brajendra Nath seal, in the course of his Foreword to this book, pointed out that "Mere religion or theology was not the pre-occupation of the Hindu mind" and that the subject of Vṛkshāyurveda "became prevalent as a distinct branch of positive knowledge as early as the Artha-śāstra of Kautilya expressly referring to it". The effort of the Calcutta Institute to bring to the notice of scholars and scientists this important text is undoubtedly laudable. And the Institute also got the text translated into English by an eminent botanist, Prof. Girija Prasanna Majumdar (who headed the department of Botany in Presidency College, Calcutta), who also wrote an elaborate introduction to the subject. The publication was an eye-opener. It was informative and pioneering.

However, the text as printed in this book was brimming with errors, and many of the readings were not proper. And the translation, although accurate for the most part, was involved in its diction and was defective in some places. A perusal of the text and translation left me and many of my colleagues rather dissatisfied. A revised edition of the text was obviously indicated. This has been done in the present publication. The translation of Prof. Girija Prasanna Majumdar, was a labour of love and was acquainted with the sincerity, expert knowledge and unbounded zeal of the learned professor. An altogether new translation was

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therefore, nor indicated: his good work was not so easily to be dismissed. It was decided that the translation of Prof. Majumdar was to be retained but edited wherever necessary. The introduction of the Calcutta edition describes Śārngadhara, the author of the Original text, as a courtier of King Hammira of Śākambharideśa (modern Bundelkhand) who flourished in the thirteenth century A.D (1283-1301). But research has shown that the compiler of this Paddhati or Samhitā known after Śārngadhara was the son of Dāmodara, who was in turn the son of Rāghava, who was himself one of the sons of King Hammira (cf. P. Peterson, ed. in Bombay Sanskrit Series; and M. Krishnamāchariar, *History of Classical Sanskrit Literature*, Madras 1937, p. 386). The Paddhati that he compiled (consists of 4689 verses) has been ascribed to 1363 A.D.

The work is little more than a mere compilation of relevant material from different classical sources. But it is encyclopaedic in its nature, and almost exhaustive in its treatment. The matter pertaining to Vṛkshāyurveda has been collected from numerous text-books of Vṛkshāyurveda, as the text itself includes a reference: 'nānā-vṛkshāyurveda śāstrebyah'. This makes it clear that there were many works in Sanskrit bearing on this subject, which were available even in the fourteenth century. Unfortunately, barring a very small number of short texts this corpus has been lost to us.

I am grateful to the late Prof. Girija Prasanna Majumdar, whose translation has been reproduced here almost in its original shape, and to the Late Sjt. Satish Chandra Seal, the founder-Secretary of the Indian Research Institute, Calcutta, who published the translation for the first time. My thanks are due to my friend, Shri A.N. Yellappa Reddy, Special Secretary to the Government of Karnataka (department of Ecology and Environment) who not only procured a copy of the Calcutta edition for me but undertook to provide modern scientific equivalents for the names of plants

given at the end of the Calcutta publication (many of which were incorrect or outdated).

As in the other publications of the Academy Shri Daivaajna K.Somayaji merits our gratitude for having agreed to include this important book in his series of books which are meant to highlight the achievements of the ancient Indian genius. The printers have done a good job in producing this book.

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शार्ङ्गधर पद्धतौ अथ वृक्षायुर्वेदः ॥

ART OF ENJOYMENT BY GARDENING

पुसां सर्वसुखैकसाधनफलाः सौन्दर्यगर्बोद्भुर -
क्रीडालोलविलासिनीजनमनः स्फीतप्रमोदावहाः ।
गुञ्जद्भ्रजविनिद्रपङ्कजभरस्फारोल्लसद्दीर्घिका -
युक्ताः सन्ति गृहेषु यस्य विपुलारामाः स पृथ्वीपतिः ॥ १॥

He is indeed a monarch if his house has extensive gardens, spacious, gardens containing large pools of water with lovely lotus blossoms over which humming bees fly: that may be regarded as the consummation of all happiness on the part of men, and that give intense pleasure to the mind of sportive and pleasure-seeking ladies puffed up with the pride of beauty. (1)

नवं मनोहारि वपुर्वराङ्गनाः
सखा कलावित्कलवल्लकीस्वनः ।
धनानि सर्वं विफलं सुखैषिणो
विना विहारोपवनानि भूपतेः ॥ २॥

If pleasure-seeking sovereigns have no gardens wherein to seek pleasure, the delicate and fine bodily form, bevy of fair and youthful ladies, compeers excelling in pleasing arts and sonorous lutes and profusion of wealth, all these are useless. (2)

शास्त्राणि तावदवलोक्य मया मुनीना-

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मर्थः स एव गदितः परमार्थयुक्त्या ।
एवं विलोक्य निखिलं च विचारयन्तः
सन्तः स्वभावसरला मुदमाप्नुवन्तु ॥३॥

I am expounding in detail that subject after a thorough study of the treatises compiled by the sages of old. May the noble-minded and upright readers find delight in going through it, and judging it as whole (for what it is worth). (3)

अथ तरुमहिमा ।

THE GLORY OF TREES

बहुभिर्बत किं जातैः पुत्रैर्धर्मार्थवर्जितैः ।
वरमेकः पथि तुर्यत्र विश्रमते जनः ॥४॥

Better to have a tree (planted) by the wayside where many rest under its shade, than to have many sons born who are devoid of wealth and virtue. (4)

दशकूपसमा वापी दशवापीसमो हृदः ।
दशहृदसमः पुत्रो दशपुत्रसमो द्रुमः ॥५॥

We read in the Śāstras that excavation of a pond is equivalent (in virtues) to sinking of ten wells, a lake is equivalent to ten ponds, and a son is equivalent to ten such lakes; and a tree is as good as ten sons. (5)

क्रीडारामं तु यः कुर्यादुद्धामफलसंयुतम् ।
स गच्छेच्छंकरपुरं वसेत्तत्र युगत्रयम् ॥६॥

He, who for pleasure makes him a good garden full of fruit and flower trees, is destined to go to the abode of Śiva and reside there for as many as three aeons. (6)

एतत्सर्वं परिज्ञाय वृक्षारोपं समाचरेत् ।
धर्मार्थकाममोक्षाणां द्रुमेभ्यः साधनं यतः ॥७॥

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One should plant trees with full knowledge of these particulars, in as much as from trees proceed virtues, material prosperity, fulfilment of desires and salvation - all these four sovereign things. (7)

यावद्दिनानि तुलसी रोपिता यद्गृहे वसेत् ।
तावद्वर्षसहस्राणि वैकुण्ठे महीयते ॥८॥

A man is sure to reside in Vaikuṇṭha (the abode of Viṣṇu) for as many thousand years as there are Basil plants planted in his house. (8)

यस्तु संरोपयेद्वित्त्वं शङ्करं प्रीतिकारकम् ।
तत्कुलेपि सदा लक्ष्मीः संतिष्ठेत पुत्रपौत्रिकी ॥९॥

Lakshmi (the Goddess of Wealth) lives for generations in the house of one who plant the Bilva tree peculiarly favourite with Śiva. (9)

एवमेव हि योऽश्वत्थं गोपयेद्विधिना नरः ।
यत्र कुत्रापि वा स्थाने गच्छेत्स भवनं हरेः ॥१०॥

He who plants Aśvattha trees after a proper method no matter where, goes to the abode of Viṣṇu. (10)

तेनेष्टा बहवो यज्ञास्तेन दत्ता वसुन्धरा ।
स सदा ब्रह्मचारी स्याद्येन धात्री प्ररोपिता ॥११॥

He, who plants the Āmalaka trees, reaps the fruit of constant asceticism, the giving of earth and of many sacrifices (yajña). (11)

वटवृक्षद्वयं मर्त्यो रोपयेद्यो यथाविधि ।
शिवलोके वसेत्सोपि सेवितस्त्वप्सरोगणैः ॥१२॥

He, who plants after a proper method two Banyan trees, goes to the abode of Śiva, and is waited on by the seraphim. (12)

निम्बत्रयं समारोप्य नयो धर्मविचक्षणाः ।

सूर्यलोकं समासाद्य वसेदब्दायुतत्रयम् ॥१३॥

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The virtuous man who plants three Nimbā trees attains to the abode of the Sun and stays there for three thousand years. (13)

चतुर्णां प्लक्षवृक्षाणां रोपणान्नात्र संशयः॥

राजसूयस्य यज्ञस्य फलं प्राप्नोति मानवः॥१४॥

There can be no doubt of the fact that the man who plants four Plākṣa trees enjoys the fruits of a Rajasuya sacrifice. (14)

पञ्चाम्रान् रोपयेद्यस्तु मार्गेषूपवनेषु च ।

भूतान्भविष्यान्पुरुषांस्तारयेत्स चतुर्दश॥१५॥

He, who plants five Āmra trees by the wayside or in the garden, secures the salvation of fourteen generations past and future, backward and forward. (15)

शिरीषशाखिनां षण्णां यः कुर्यात्प्रतिरोपणाम् ।

गारुडं लोकमासाद्य मोदते देववत्सदा॥१६॥

He, who plants six Śīrisa trees by the wayside, attains to the abode of Garuḍa and spends his days there in as much pleasure as the gods do. (16)

पलाशशाखिनः सप्त गोपयदेकमेव वा ।

ब्रह्मलोकमवाप्नोति पूज्यते चामरोत्तमैः॥१७॥

The man who plants either seven or even one Palāśa tree, gets to the abode of Brahma and is waited upon there by the best of gods. (17)

उदुम्बरद्रुमानष्टौ रोपयेत्स्वयमेव यः॥

प्रेरयेद्रोपणायापि चन्द्रलोके स मोदते॥१८॥

He, who plants eight Uduṃbara trees himself or gets them planted by others, reaches the abode of the Moon and enjoys intensity of pleasure there. (18)

पार्वती तोषिता तेन स भवेच्च निरामयः ।

पूजिता देवताः सर्वाः मधूको येन रोपितः॥१९॥

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He, who plants a Madhuka tree, becomes free from all diseases, and by him all the gods, especially, the goddess Pārvati, is pleased or gratified. (19)

क्षीरिकाकदलीद्राक्षाप्रियालपनसान्वितान् ।
तरुन्संरोप्य नो दुःखी जायते सप्तजन्मसु ॥२०॥

He, who plants a tree along with any of these trees: Kshirika, Kadali, Drakṣa, Piyala, Panasa, etc., ensures himself against all diseases for seven lives (births) to come. (20)

अज्ञानाज्ज्ञानतो वापि जम्बूर्येन प्ररोपिता
गृहेऽपि वसन्नित्यमति धर्मेण युज्यते ॥२१॥

He, who plants trees capable of bearing fruits and flowers besides those that have already been mentioned enjoys the fruits of virtue in his own house every day. (21)

अन्यानपि तरुण्यारोप्य फलपुष्पोपयोगिनः ।
रत्नधेनुसहस्रस्य फलं प्राप्नोति मानवः ॥२२॥

He, who plants trees capable of bearing fruits and flowers besides those that have already been mentioned enjoys the fruits of the gift of one thousand cows of gold. (22)

अश्वत्थमेकं पिचुमन्दमेकं ।
न्यग्रोधमेकं दशचिञ्चिणीकाः
कपित्थबिल्वामलकत्रयं च
पञ्चाम्रावपि नरकं न पश्यति ॥२३॥

He, who plants Asvattha, Pichumanda, Nyagrodha, one each; ten Tamarind trees, and Kapittha, Vilva and Amalaka, three each, and five mango trees, is never fated to see hell. (23)

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अथ निवासासन्नतरुशुभाशुभलक्षणानि ।

**THE GOOD AND EVIL OMENS RELATING TO RESIDENCE
NEAR TREES**

गृहस्य पूर्वदिग्भागे न्यग्रोधः सर्वकामिकः ।

उदुम्बरस्तथा याम्ये वारुण्यां पिप्पलः शुभः ।

प्लक्षश्चोत्तरतो धन्यो विपरीतास्तु वर्जयेत् ॥ २४ ॥

The presence of Banyan tree in the east of a house means fulfillment of all desires, and Udumbara tree in the south, Pippala in the west and Plaksha in the north are productive of good; everything else is to be strictly forbidden. (24)

वर्जयेत्पूर्वतोऽश्वत्थं प्लक्षं दक्षिणातो गृहात् ।

पश्चिमे चैव न्यग्रोधं तथोदुम्बरमुत्तरे ॥ २५ ॥

One should do well to avoid Aśvattha tree in the east of a house Plaksha tree in the south, Banyan tree in the west and Udumbara in the north. (25)

देवदानवगन्धर्वाः किन्नरोरगराक्षसाः ॥

पशुपक्षिमनुष्याश्च संश्रयन्ति सदा तरून् ॥ २६ ॥

For this simple reason that gods and demons and semi-celestial beings, gandharvas and kinnaras, snakes and voracious demons, beasts and birds and men, — all these have recourse to trees or take shelter under them. (26)

सर्वेषां वृक्षजातीनां छाया वर्ज्या गृहे सदा ।

अपि सौवर्णिकं वृक्षं गृहद्वारे न रोपयेत् ॥ २७ ॥

Hence one should do well to avoid the shades of all trees in one's house; one should not plant in front of one's house a tree even if it is made of gold. (27)

बदरी कदली चैव दाडिमी बीजपूरकन् ।

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प्ररोहन्ति गृहे यस्य तद्गृहं न प्ररोहति ॥२८॥

Children do not multiply in the house of a man wherein germinate (grow) Badari, Kadali, Dadima and Bijapuraka. (28)

पलाशाः काञ्चनाराश्च तथा श्लेष्मातकार्जुनाः ।

करञ्जाश्चेत्यमी वृक्षा न रोप्याः सुखिना गृहे ॥२९॥

A man desirous of happiness should not plant in his house Palaśa, Kañchana, Śleṣmantaka, Arjuna and Karañja, all these five trees. (29)

आसन्नाः कण्टकिनो रिपुभयदाः क्षीरिणोर्थनाशाय ।

फलिनः प्रजाक्षयकरा दारुण्यपि वर्जयेत्तेषाम् ॥३०॥

A thorny plant nearby is productive of danger from enemies, and the proximity of a Kshiri-vṛkṣa causes loss of wealth and a fruiting thorny tree which is also milky leads to loss of human lives; one should do well to avoid even the very good of these trees. (30)

नीलीं हरिद्रां च नरः सदोप्त्वा

पुत्रैर्धनैश्च क्षयमभ्युपेयात् ।

एतास्तु सर्वाः स्वयमेव जाता-

श्छिन्द्यादृषीणां वचनाद्विधिज्ञः ॥३१॥

If one plants Nili and Haridrā, one is destined to be ruined himself together with his sons and all his wealth. If these trees grow even of themselves the persons versed in the laws should cut them off in accordance with the sayings of the Sages. (31)

न कुर्युर्याम्यनैऋत्याग्नेयष्वपि हि वाटिकाम् ।

अन्यथा कलहोद्वेगौ कष्टं वा लभते भृशम् ॥३२॥

One should never make a garden in the nairṛt or agni corner of one's house; if one does so, distress and sorrow will be the outcome. (32)

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तस्माद्राक्षा हि शुभदं पुत्रसंनिधिवर्धनम् ।
पश्चिमोत्तरपूर्वेषु भवेदुपवनं कृतम् ॥ ३३॥

If one lays out a garden in the north or in the west of one's house, one's children and grandchildren multiply; hence a landlord, i.e., the proprietor of a house, should make gardens after these rules. (33)

THE SELECTION OF SOILS

अथ भूमिनिरूपणम् ।

जाङ्गलानूपसामान्यस्वभावापि च मेदिनी ।

भेदैः सा भिद्यते षडभिर्वर्णतो रसतस्तथा ॥ ३४॥

Three main types of soil, viz. Jāṅgala (barren), Anūpa (moist) and Sāmānya (ordinary) are divided into six on the basis of colour and taste. (34)

असितविपाण्डुश्यामललोहितसितपीतरोचिषः क्रमशः ।

मधुराम्लवणतिक्तकटुककषाया भुवो रसतः ॥ ३५॥

Soils having black, pale (shady), blue, red, yellow, and white colour or appearance are respectively associated with sweet, acid, salty, sour, bitter and pungent tastes. (35)

विषपाषाणवल्मीकबिलदुष्टा तथोषरा ।

दूरोदका शर्करिला तरुभ्यो न हिता मही ॥ ३६॥

The soils that are poisonous, or stony, or full of anthills, or barren, or full of gravels, and that which still remain uneven even when ploughed, or that which has water hidden in its depths are not favourable to the growth of trees. (36)

इन्द्रनीलशुकपक्षकोमला

शङ्खकुन्दकुमुदेन्दुसंनिभा ।

तप्तकाञ्चनविकासिचम्पक-

स्पर्धिनी वसुमती प्रशस्यते ॥ ३७॥

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Do well to know that the soil which has the brilliance of blue gems, that which is as soft as the feather of the Śuka-bird, that which is as white as the conch, the Kumuda flower, or the moon, and that which has the colour of melted gold or that of a blown Champaka flower, — all these are favourable to growth of trees. (37)

समा समासन्नजला हरित्तरूतृणाङ्कुरा ।

तस्यां सर्वे यथास्थानं प्ररोहन्ति महीरूहाः ॥३८॥

All kinds of trees flourish in the soil which is even, the soil near which there is water, and where the sprouts of trees put on green appearance. (38)

न जाङ्गला न चानूपा भूमिः साधारणा शुभा ।

तस्यां सर्वेऽपि तरवः प्ररोहन्ति न संशयः ॥३९॥

The soil, which is neither barren nor watery, may be said to be Ordinary, and there all types of plants grow. (39)

पनसलकुचतालीवशजम्बीरजम्बू

तिलकवटकदम्बाम्रातकखर्जूरपूगाः ।

कदलीतिनिशमृद्धीकेतकीनालिकेर

प्रभृतय इति चान्ये प्रायशोनूपजाः स्युः ॥४०॥

Panasa, Lakucha, Tālī, Varṇṣa, Jambīra, Jambū, Tilaka, Vaṭa, Kadamba, Āmrataka, Kharjūra, Pūga, Kadali, Tiniśa, Mrdvi, Ketaki and Nalikera, all these trees grow in Anupa soil. (40)

(शोभाञ्जनश्रीफलसप्तपर्णी

शेफालिकाशोकशमीकरीराः ।

कर्कन्ध राकचर निम्बशोका

वृद्धि लभन्ते भुवि जांगलायाम् ॥)

बीजपूरकपुंनागचम्पकाम्रातिमुक्तकाः ।

प्रियंगुदाडिमाद्याश्च साधरणममुद्भवाः ॥४१॥

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Bijapuraka, Punnaga, Champaka, Amra, Atimuktaka, Priyangu, Dadima and similar others, – all these trees grow in the ordinary soil. (41)

निधिदेवमहीपानां प्रभावाच्चातियन्ततः।

असात्म्यभूमिसंपन्ना अपि सिद्ध्यन्ति पादपाः॥४२॥

The trees which do not ordinarily grow in a particular type of soil may do so if there is wealth hidden under it, or through the grace of gods, or through the grace of sovereigns. (42)

अथ पादपविवक्षा।

THE CLASSIFICATION AND PROPAGATION OF PLANTS

वनस्पतिद्रुमलतागुल्माः पादपजातयः

बीजात्काण्डात्तथा कन्दात्तज्जन्म त्रिविधं विदुः॥४३॥

Plants are classified into trees, shrubs, creepers and herbs, and they propagate through seeds, cuttings, and bulbs. (43)

ते वनस्पतयः प्रोक्ता विना पुष्पैः फलन्ति ये।

द्रुमाश्च ते निगदिताः सहपुष्पैः फलन्ति ये॥४४॥

The trees which produce fruits without flowers are called **Vanaspatis**, and those that spread themselves in several branches a little above the ground are called **Gulmas**. (44)

प्रसरन्ति प्रतानैर्यास्ता लताः परिकीर्तिताः।

बहुस्तम्बा विटपिनो ये ते गुल्माः प्रकीर्तिताः॥४५॥

Those that spread themselves on the ground are called **Latas** and those that spread themselves in several branches a little about the ground are called **Gulmas**. (45)

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जम्बूचम्पकपुंनागनागकेशर चिञ्चिणी ।

कपित्थबदरीबिल्वकुम्भकारिप्रियङ्गवः ॥४६॥

पनसाम्रमधूकाद्याः करमर्दाश्च बीजजाः ।

ताम्बूली सिन्धुवारश्च तगराद्याश्च काण्डजाः ॥४७॥

Do well to know that Jambū, Chāmpaka, Punnāga, Nāgakeśara, Chinchinī, Kapittha, Badari, Vilva, Kum̐bhakari, Priyaṅgu, Panasa, Āmra, Madhuka and the like, Karamarda and similar others grow out of seeds; and Tāmbulī, Sindhuvara, Tagara and such others grow out of kaṇḍa (portions of stems, i.e., cuttings). (46-47)

पाटलादाडिमीप्लक्षकरवीरवटादयः ।

मल्लिकोदुम्बरः कुन्दौ बीजकाण्डोद्भवा मताः ॥४८॥

And Pātala, Dāḍima, Plaksha, Karavira, Vata and such others, Mallika, Udumbara, Kunda and others grow out of seeds and cuttings. (48)

कुङ्कुमार्द्र रसोनालुकन्दाः कन्दसमुद्भवाः ।

एलापद्मोत्पलादीनि बीजकन्दोद्भवानि तु ॥४९॥

Kum̐kuma, Ādra, Rasona, Āluka, grow out of kanda (bulbs, and such other underground stems), and Ela, Padma, Utpala and such others grow both out of kaṇḍa and seeds. (49)

अथ बीजोप्तिविधिः ।

RULES FOR SOWING SEEDS

सम्यक्कृष्टे समे क्षेत्रे माषानुप्त्वा तिलस्तथा ।

सुनिष्पन्नानपनयेत्तत्र बीजोप्तिरिष्यते ॥५०॥

One should sow pulses and sesamum on a level ground after it has been thoroughly ploughed with a plough, and should cut the crops when they are ripe and then should sow seeds on that ground again at pleasure. (50)

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अथर्तु पक्वात्फलतोवशोषिता-
न्विकृष्यबीजं पयसा निषिच्य।
विशोषितं पञ्चदिनानि सर्पिषा
विडङ्गमिश्रेण च धूपयेत्ततः ॥५१॥

First of all one should take well-matured seeds of fruits of the season, sprinkle milk and clarified butter over them, keep them for five days (in this condition), and then fumigate them with frankincense. Or, (51)

क्षीरनिषिक्तं बीजं बृहतीतिलभस्मसर्पिषा लिप्तम्।
गोमयमृदितमथोसं सद्यो जायेत धूपितं वसया ॥५२॥

One should besmear these seeds thus sprinkled with milk, with powders of Brhati and sesamum mixed with ghee, dry them and besmear them again with cowdung, and then fumigate with fat of some animal. If the seeds thus prepared are sown, they sprout in a single night. (52)

पयसि निषिक्तं बीजं गोमयपरिमर्दितं विशोष्य ततः।
माक्षिकविडङ्गचूर्णैर्बहुशो मृदितं प्रजायेत् ॥५३॥

After besmearing with cowdung the seeds sprinkled with milk, one should dry them and besmear them again many times with powers of Viḍaṅga mixed with honey and sow them; and they will sprout very soon. (53)

जम्बूपनसचूतानां सरलं लकुचस्य च।
क्षीरसिक्तं वपेद्बीजं घृतगोविड् विडङ्गवत् ॥५४॥

The seeds of Jambū, Panasa, Chūta, Sarala, Lakucha should be treated with milk and sown with ghee, cowdung and Viḍaṅga just mixed therewith. (54)

शुचिस्नातो बिभ्रद्वसनममलं पूजितसुरो
गुरुं नत्वा दत्त्वा वसु वसुर्मतीं वा गुणवते।

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स्वयं बीजान्यादौ वपति कतिचिद्वास्तुपुरुषं
मनस्यन्तः कृत्वा तदनु परितोन्यः परिजनः ॥५५॥

A person (the master of the household) after taking ablution and putting on well-washed clothes, and after worshipping the gods, and making obeisance to his Guru (spiritual preceptor) and giving away earth or money to a qualified Brahmin, and making obeisance again to the presiding deity of foundation (Vastupurusha) should himself sow seeds. His attendants should follow suit. (55)

बीजधानीं तृणास्तीर्णा कृत्वा सिञ्चेत्पयोम्बुना ।
जाताङ्कुरां च सलिलैर्निस्तृणां शोषमानयेत् ॥५६॥

One should first of all sow seeds in the seed-bed, spread grass over it and sprinkle milk and water, and then when the seeds germinate remove the grass, dry the earth a little, and transplant these sprouts together with their roots and the earth attached thereto. (56)

अथ रोपणविधानम् ।

THE PROCESS OF PLANTING

अयथाविहितानां यन्मनोज्ञतासंपदौ नस्तः ।

कथयाम्यतस्तरूणां रोपविधानं यथोद्दिष्टम् ॥५७॥

The process of planting trees is being laid down, because the trees when planted irregularly lose their beauty and vigour. (57)

ध्रुवमृदुमूलविशाखागुरुभं श्रवणस्तथाश्विनी हस्तः ।

उक्तानि दिव्यदृग्भिः पादपसंरोपणे भानि ॥५८॥

Dhruva (Rohini, Uttaraphalguni, Uttarāśāḍhā and Uttarabhadrapada), Mṛdula (Chitra, Anurādhā, Mṛgaśīra and Revati), Mula, Viśākha, Pushya, Śravaṇa, Āśvini and Hasta- all these constellations are characterised as mild, and they are favourable to the planting of trees according to the sages. (58)

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हस्त प्रमाणान् पयसा सुसिक्तान्

संक्रामयेन्मूलवहः समृत्कान् ।

सर्पिर्मधूशीर बिडङ्गलिता-

न्बिले निदध्याच्च करीषयुक्ते ॥५६॥

When a sprout planted after being sprinkled with milk grows one cubit in length, one should dig it out together with the earth attached thereto and then apply to it roots of Uśira, Viḍaṅga and ghee pasted together and then replant it in a pit together with cowdung. (59)

अवालुकाश्लक्ष्णमृदा पूरिते गर्तशोधनम् ।

कोदण्डार्धमिते खाते जलसिक्ते वपेत्तरुम् ।

कदलीक्षीरिणौ रोप्यौ मूले दत्त्वा तु गोमयम् ॥६०॥

One should plant a tree (seedling) in a pit two cubits in depth, well watered, filled with fine dusts of earth free from sands, and filled with cowdung, Plantain sprouts and kshiri (withmilky sap) trees should be planted after applying only cowdung to the roots. (60)

रम्भायाः सुपरिणतैः फलैर्विलिप्तां

संशुष्कां भुवि निहितां पलालरञ्जुम् ।

शुद्धायामुपरि तृणेन गाढगुप्ता-

मासिञ्चेदवहुजलैर्वहन्यहानि ॥६१॥

First of all one should plant and besmear a long straw rope with this paste (thus prepared) then put the rope (thus treated with banana paste) down in the ground lengthwise. Then for a long number of days one should go on sprinkling water upon it little by little. (61)

सा रञ्जुस्तदनु तमालनीलभासो

बिभ्राणानरणरुचोङ्कुरान् प्रसूते ।

भूयस्तानुपचितपत्रकाण्डमूला-

नारोप्य प्रथितविधानतो निषिञ्चेत् ॥६२॥

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Then, sprouts having bluish and reddish appearance like the fresh Tamala tree will sprout out of that rope; and then when by degrees branches, leaves and roots will become visibly manifest, one should plant these sprouts, elsewhere and sprinkle water upon them. (62)

आषाढे श्रावणे मासि बीजावपनरोपणे ।

ग्रीष्मादन्यत्र वल्लीनां केचिदिच्छन्ति रोपणम् ॥६३॥

Seeds (of trees and other garden plants) should be sown during the months of Āṣāḍha and Śrāvaṇa; and some opine that they may be sown in any season of the year, except in summer. (63)

मण्डपनन्दावर्त्त स्वस्तिकचतुरस्रसर्वतोभद्रैः ।

वीथीनिकुञ्जपुञ्जकविन्यासैः पादपा रोप्याः ॥६४॥

One should lay out the trees in the garden so as to look like an altar, a nandyavarta, a swastika, a chaturasra, a sarvatobhadra, a vithi (avenue lined with trees), a nikuñja (grove-bower), and in clusters (here and there). (64)

दशविंशतिषोडशभिस्तु करै-

रधरोत्तरमध्यकृतान्तरकान् ।

द्विचतुस्त्रिभिरन्तरितान् क्रमश-

स्तृणपादपगुल्मभृतश्च वपेत् ॥६५॥

One should plant trees at an interval of 10 cubits in the lower level of the garden, and at 20 cubits in the higher and at 16 cubits in the middle; but if the surface of the garden be plane one should plant grass-like plants at an interval of 2 cubits, trees at 4, and gulmas at 3 cubits apart. (65)

सान्द्ररोपणमवृद्धिकारणं

वातभीतिरतिदूरोपणात् ।

भिन्नवर्गरचनाल्पपीडना

नैव युक्तिरियमेव शस्यते ॥६६॥

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Trees, if thickly sown, are hindered in their growth and, if sown very sparsely, they are in danger of falling down even in consequence of mild winds; hence for lean plants, in the laying out a garden, planting after the method described above is wise. (66)

कुसुमं फलमप्युपभोगसहं
फलिनो हि न यस्य दलन्ति शिखाः।
कुसुमेन विनैव फलन्ति च ये
न भवन्ति शुभास्त इह ते पनसाः ॥६७॥

The trees the fruits and flowers whereof are not enjoyable by men, the upper parts whereof drop off, which produce fruits without producing flowers, are regarded as inauspicious in the Śāstras; jackfruit tree is an example. (67)

मातुलुङ्गरजनी सकण्टकः
किंशुकश्च गिरिकर्णिका सिता।
तिन्त्रिणीकविफलाक्षनीलिकाः।
कोविदार इति भीतिदो गणः ॥६८॥

Mātulaṅga, Rajani, thorny plants, Kiṁśuka, Girikarnika, Aśita, Tīrtiḍi, Viphalakṣa, Nīlika, Kovidāra, are productive of danger. (68)

फलिन्यशोकपुनागशिरीषनिम्बचम्पकाः।
मङ्गल्याः प्रथमं रोप्या भल्लातश्च गदापहः ॥६९॥

A fruiting tree, Asoka, Punnaga, Śirīṣa, Nimbā and Champaka are conducive to welfare and should be planted before all. Do well to know that Bhallataka is productive of diseases. (69)

पूर्वस्यां करमर्दवंशविटपाः पारावता दक्षिणे
कौबेर्या बदरी कपित्थतरवो धात्री च पश्चाच्छिवा।
अन्ये चोत्तममध्यमाधमशिफा रोप्याः स्ववर्गेः समं
कृत्वा चान्तरकं यथायथममी पत्रैरुपर्यस्पृशः ॥७०॥

One should plant Karamarda and Bamboo in the east of a garden, Parāvata in the south, Vadan and Kapittha in the north, and Dhātri in the west. One should plant trees with an eye to the fact that there is room for the spread of their roots and one must see that the leaves of each other do not touch. (70)

अथ निषेचनविधिः ।

RULES FOR WATERING THE PLANTS

सर्वस्यापि नवोत्तस्य सायंप्रातर्निषेचनम् ।
शीतातपसमीरेभ्यो रक्षेच्च सुविधानतः ॥७१॥

One should water the newly planted trees both in the morning and evening, and should systematically protect them against cold, stress and wind. (71)

हेमन्ते शिशिरे देयं जलं चैकान्तरे दिने ।
वसन्ते प्रत्यहं ग्रीष्मे सायंप्रातर्निषेचनम् ॥७२॥

One should water them every alternate day in autumn and in winter; every day in spring, and twice a day during the summer, i.e., once in the morning and once in the afternoon. (72)

वर्षासु च शरत्काले यदा वृष्टिर्न दृश्यते ।
तदा देयं जलं तज्जैरालवाले महीरुहाम् ॥७३॥

During the rainy and autumnal seasons when it does not rain one should fill the circular ditch under the tree with water. (73)

वारिणा यावता यस्य मूले सौहित्यमिष्यते ।
तावत्तस्य तरोर्देयं किं घटार्थविवक्षया ॥७४॥

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One should go on applying water till the earth attached to the roots of the tree becomes wet: one should not measure the quantity of water applied for this purpose. (74)

आलवाले स्थितं तोयं शोषं न भजते यदा ।
अजीर्णं तद्विजानीयान्न देयं तादृशे जलम् ॥७५॥

Trees suffer from indigestion if the water in the ditches is not dried up, hence one should not pour fresh water in it till such is the case. (75)

समीपजातं यत्नेन तृणगुल्मलतादिकम् ।
स्फोटनीयं विधिज्ञेन द्रुमानां वृद्धिमिच्छता ॥७६॥

A person versed in the principles of gardening should not hesitate, in the interest of trees, to extirpate the weeds, creepers and shrubs which grow beside them. (76)

अथ द्रुमरक्षा।

RULES FOR THE PROTECTION OF TREES

नीहाराच्चण्डवाताच्च धूमाद्वैश्वानरादपि ।
जालकारात् प्रयत्नेन रक्षणीयाः क्षमारुहाः ॥७७॥

One should carefully protect trees against (destructive influence of) dew, strong wind, smoke, fire and spiders. (77)

पंक्तिमध्ये तु सुफला बाह्ये तत्परोत्तरे ।
वृक्षाः कार्या युतावृत्या सा चापि परिखायुता ॥७८॥

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Trees blessed with fruits should be placed in the middle of the row of trees; and others outside; all trees should be well protected with walls having ditches around them. (78)

विद्युदाहतवृक्षस्य भूमिमादाय सर्वतः ।

रक्षार्थे विकिरेदेषां तया न हिमबाधनम् ।

दीप्तोप्यग्निः शमं याति वज्रदग्धद्रुभस्मना ॥७९॥

One should take up the ashes of trees struck by lightning, throw the same round other trees and this will ensure the latter against cold. These have the power to allay (extinguish) even the burning fire. (79)

सितशाल्योदनं दध्नां सैन्धवेन युतं वने ।

क्षेपणीयं च परितो गराणां वृष्टिवारणम् ॥८०॥

Throwing boiled Śālī rice of white variety mixed with curd and rock—salt round the trees ensures their protection against poisonous (viz. harmful) rain. (80)

शलभाखुपतङ्गानं पिपील्यादेर्भये सति ।

अष्टोत्तरशतं जप्त्वा मन्त्रं पत्रे ततो लिखेत् ॥८१॥

If one apprehends danger from mice, locusts, ants etc., one should utter the following formula (mantra) 108 times, and write it down on the leaf of a tree:

Om svasti. Kiskindhāsthita prakatāparakramāntarhitārka-
maṇḍalopajīvitasya Śrīhanumānājñāpayati mūshakapataṅga-
pipīlikasālabhakarabhanvakakita-gandhikanivahairna sthāta-
vyam.

Ajñamatikramāmanasya śarīranigrahaḥ samāvartayati.

Tasyavānarasimhasyakramāmanasyasāgaram.

Kakshāntaragato vataḥ jīmūta iva garjati.

Hum phat namah.

(81)

मन्त्रः । ॐ स्वस्ति

किष्किन्धास्थितप्रकटपराक्रमान्तर्हितार्कमण्डलोपजीवितस्य

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श्रीहनुमानाज्ञापयति

मूषकपतङ्गपिपीलिकाशलभकरभान्वककीटगन्धिकानिवहैर्नस्थातव्यम्।
आज्ञामतिक्रममाणस्य शरीरनिग्रहः समावर्तयति ॥ तस्य वानरसिंहस्य
प्लवमानस्य सागरम्। कक्षान्तरगतो वायुर्जिमूत इव गर्जति॥ हूं फट् नमः॥
पत्रे मनुं समालिख्य जप्त्वा तं निखनेद्भुवि ।
क्षेत्रे कीटपतङ्गाखुपिपील्यादिर्विनश्यति ॥८२॥

And after writing down the (above) formula on the leaf and powdering it one should bury it in the ground under the tree. This will look to the destruction of locusts, mice and ants of the field.

(82)

अथोपवनप्रक्रिया ।

CONSTRUCTION OF A GARDEN

घनप्रवालस्थागितातपानि
विकीर्णपुष्पाणि समीरणेन ।
गृहाणि कुर्यादतिमुक्तकानां
लताभिरालोल मधुव्रताभिः ॥८३॥

One should construct garden-houses in a place where the sun's rays are prevented by a canopy of newly grown leaves, which is adorned with blooming flowers, rocked by breezes and covered with Mādhavi creepers bristling with restless black bees. (83)

स्थानेष्वपरेषु तथा पादपयुगलेषु मिथुनसंवाह्याः ।
शाखावलम्बिनीभिर्दोलाः कार्या लताभिश्च ॥८४॥

There one should make a swing out of the strong creepers attached to the branches of two trees, fit for a couple to sit on. (84)

तरुविटपलतानिकुञ्जरम्या
विरचितकेन्द्ररसानुगण्डशैला ।
विविधमणिगुहा विचित्रधातुः ।
क्वचिदपि पर्वतिका विहारहेतुः ॥८५॥

In some places within the garden one should, for the purpose of enjoyment, make (artificially) a nice, beautiful or lovely cave adorned with branches of trees, leaves and creepers; or artificial peaks situated on a mound covered with trees, or a variety of caves associated with a good many gems and precious stones brought from mountains; or many artificial mountains adorned with metals of different colours. (85)

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केकानिनादसुभगाः सदासंवासिताहयः ।

ताण्डवेन तदुद्देशान्मण्डयन्ति शिखण्डिनः ॥८६॥

And there for the purpose of preventing fear from snakes as well as for the display of beautiful dance one should keep peacocks. (86)

मन्त्रः विलम्बिनो यत्र तटद्रुमा वपु-

र्विलोकयन्ति प्रसवेक्षणैरिव ।

समं दिशन्तः फलहंसभूषणा

क्वचिद्भवेत्पुष्करिणी मनोरमा ॥८७॥

In places one should dig ponds, the rows of trees on the bank of which will mistake their own shadows reflected in the water for their own bodies.

[Editor — The original text gives here a mantra, of which the above is not the translation. I do not know how this translation has come here.] (87)

निर्यादः सलिलां सुखावतरणां तीरेषु पुष्पद्रुमां

कूजद्वक्षविहङ्गमां सतरणीमत्यायतां दीर्घिकाम् ।

कुर्यात्तत्र समुल्लसत्कमलिनीपत्राङ्कुरश्यामलां

श्यामालोचनमल्लिकां विदधतीं नीलोत्पलानि क्वचित् ॥८८॥

Steps should be constructed (for the ponds) in places whereby men can descend with ease into the vast artificial lake with pleasure boats in it, and on all sides of the steps flower trees should be planted; and care should always be taken to see that ferocious animals do not live in the water of that beautiful lake, and that the lake is always tenanted by birds like swans. Attempt should be made to intensify the beauty of the lake by having flowers of various colours, like lotuses, mallikā, blue lotus, etc, in different places of it. (88)

उपवनमिव वारिमध्यमग्नं

विमलतया प्रतिबिम्बितं दधाना।

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शशिकरनिकरेण पूरिते च

क्वचिदुपनेयपयाः सुखाय वापी ॥८९॥

In places one should construct artificial lakes with such eye-delighting water in it that the reflection of the moon-beams in it causes the illusion of a garden in water. (89)

मध्ये तस्मिन् शिशिरशिखरिस्पर्धि वेश्म प्रवातं

गूढोपान्तं सुरभिकुसुमैः शाखिभिर्नम्रशाखैः।

स्थाने स्थाने स्फटिकधवलं मण्डपं मण्डनाहं

कुर्यात्कस्मिन्नपि च कदलीमन्दिरं मन्दवायुः ॥९०॥

One should plant trees bent down under the weight of sweet flowers on all sides of the white and well ventilated houses, houses as white as the peak of the Himalayas, built inside the artificial lake referred to above. And in places of the garden one should construct circular seats as white as marble, and should make bowers of plantain trees in places where there is gentle breeze. (90)

क्वचिदप कूपं कुर्यादुपवनदेशे सुमृष्टसलिलभरम्।

संसिक्तसकलविटपं बद्धं पाषाणसंचयैः परितः ॥९१॥

In places of the garden deep wells, paved on all sides with stones with sweet water in it, should be dug with the water of which all the trees of the pleasure garden may be well watered. (91)

अञ्जनमुस्तोशीरैः सनागकोशातकामलकचूर्णैः।

कतकफलसमायुक्तैः कूपे योगः प्रदातव्यः ॥९२॥

कलुषं कटुकं लवणं विरसं

सलिलं यदि वाशुभगन्धि भवेत्।

तदनेन भवत्यमलं सुरसं

ससुगन्धिगुणैरपरैश्च युतम् ॥९३॥

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If the water of the well be polluted and becomes pungent, bitter and tasteless, salty or malodorous, Añjana, Musta, Jśira, Nāgakeśara, Koṣāṭaka, powdered Āmalaka together with Katakaphala should be thrown into it; and this will make the foul water transparent, tasteful and fragrant, and in addition will confer on it many other good qualities. (92-93)

अथ कूपार्थं भूमिपरीक्षा ।

EXAMINATION OF THE SOIL WHERE WELLS CAN BE DUG

पातालादूर्ध्वगमाः शिराः प्रसर्पन्ति सर्वतो दिक्षु ।

नीरस्य भूमिमध्ये ज्ञात्वा ताः कल्पयेत् कूपम् ॥९४॥

The ascending veins of water issuing out of the nether regions spread in all directions; hence before digging a well one should acquire the knowledge of these veins inside the earth. (94)

यदि वेतसोम्बुरहिते देशे हस्तैस्त्रिभिस्ततः पश्चात् ।

सार्धं पुरुषे तोयं वहति शिरा पश्चिमा तत्र ॥९५॥

If there be Vetasa trees in a waterless region, 3 cubits and 18 digits below the earth there will be found a vein of water flowing to the west. (95)

चिह्नमपि चार्धपुरुषे मण्डूकः पाण्डुरो हि मृत्पीता ।

पुटभेदकश्च तस्मिन् पाषाणे भवति बहूतोयः ॥९६॥

If a yellow frog and yellow soil be found, 2 cubits and 6 digits below the surface of the ground in the field, the bend of a river full of water is sure to be found even beneath hard rock (there). (96)

जम्बूवृक्षस्य प्राग्बल्मीको यदि भवेत्समीपस्थः ।

तस्मादक्षिणपार्श्वे सलिलं पुरुषद्वये साधु ॥९७॥

If there be anthills to the east of, and near, a Blackberry tree, water is sure to be found 2 cubits and 6 digits beneath the surface of the ground there. (97)

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अर्धपुरुषे च मत्स्यः पारावतसंनिभश्च पाषाणः ।

मृद्भवति तत्र नीला दीर्घं कालं च बहूतोयम् ॥९८॥

If fishbones, stones having the colour of pigeons, or blue soil are to be found, 2 cubits and 6 digits beneath the surface of the ground somewhere, beneath these things there water is sure to continue long. (98)

वल्मीकोपमितायां निर्गुण्ड्यां दक्षिणे करत्रयोन्माने ।

पुरुषद्वयेन पादे भवति जलं स्वादु चाशोष्यम् ॥९९॥

To the south of a Nirgunda tree grown on soil covered with anthills, at a distance of 3 cubits, and 10 cubits and 3 digits beneath the ground, tasteful and perennial water is sure to be present. (99)

रोहितमत्स्योर्धनरे मृत्कपिला पाण्डुरा ततः परतः ।

सिकताश्च शर्कराश्च क्रमेण परतो भवत्यम्भः ॥१००॥

If 2 cubits and 12 digits beneath the ground Rohita fish, yellow soil or thin sands and gravels are to be found successively, water is sure to be there beneath these. (100)

पूर्वेण यदि बदर्या वल्मीकौ दृश्यते जलं पश्चात् ।

पुरुषैर्बिभिरादेश्यं श्वेता गृहगोधिकार्धनरे ॥१०१॥

If an anthill be found in east of a place where a Badari tree is and if a white lizzard is there, 2 cubits and 2 digits below the ground, then water will certainly be found in the west (of that locality) 13 1/2 cubits below the surface. (101)

सफला वा बदरी चेद्दिश्यपरस्यां जलं ततो भवति ।

पुरुषत्रये सपादे भवति परं दुन्दुभेश्चिह्नम् ॥१०२॥

One is sure to find water 14 cubits and 15 digits below the ground in the west of a fruiting Badari tree towards the west of which if there are to be found signs of the existence of a cobra. (102)

काकोदुम्बरिकायां वल्मीको दृश्यते शिरा तस्मिन् ।

पुरुषत्रये सपादे पश्चिमदिक्स्था च सा वहति ॥१०३॥

One is sure to find a vein of water moving to the west 14 cubits and 15 digits below the ground where one finds anthill beneath a Kākodumbara tree. (103)

आपाण्डुरा च मृत्स्ना गौरसवर्णाश्च भवति पाषाणाः ॥

पुरुषार्धे कुमुदनिभो दृष्टिपथं मूषको याति ॥१०४॥

आसन्नो वल्मीको दक्षिणपार्श्वे बिभीतकस्य ।

अध्यर्धे भवति शिरा पुरुषे ज्ञेया दिशि प्राच्याम् ॥१०५॥

One is sure to meet with water 6 cubits below the ground in the west of a place where the ground is a little yellowish and the stone is of the colour of milk and also where 2 cubits and 6 digits below the ground one finds a white mouse, and nearby an anthill in the south a Vibhitaka tree. (104-105)

तस्यैव पश्चिमायां वल्मीको यदि भवेद्धस्ते ।

तत्रोदग्भवति शिरा चतुर्भिरर्धाधिकैः पुरुषैः ॥१०६॥

If an anthill is there in the west of this particular place one cubit away, then 20 cubits and 6 digits below the ground a vein of water moving to the north is sure to be found. (106)

श्वेतो विश्वंभरकः प्रथमे पुरुषे तु कुङ्कुमाभोश्मा

अपरस्यां दिशि च शिरा नश्यति वर्षत्रयेऽतीते ॥१०७॥

Where the white insect, named Viśvaṁbharaka, is to be found, 4 cubits below the ground as well as stone of mixed yellow and red colour, there a vein of water is to be found in the west of the place when the soil is dug out. But the vein will cease to exist three years after it has been found out. (107)

सकुशः सित एतस्यां वल्मीको यत्र कोविदारस्य ।

मध्ये तयोर्नरैरर्ध पञ्चमैस्तोयमक्षोभ्यम् ॥१०८॥

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Where an anthill is to be found between white Kuśa and Kovidāra trees, there 25 cubits towards the west one can find profusion of water 24 cubits and 18 digits below the surface. (108)

प्रथमपुरुषे भुजङ्गः कमलोदरसंनिभा मही रक्ता ।
कुरुविन्दकपाषाणाश्चिह्नान्येतानि वाच्यानि ॥१०९॥

Water is sure to be found below the ground of a soil where 4 cubits below the surface a serpent, soil having the colour of a lotus, and a kind of stone named Kuruvindaka, are to be found. (109)

सर्वेषां वृक्षाणामधःस्थितं दर्दुरं यदा पश्येत् ।
तस्माद्धस्तं तोयं चतुर्भिरर्धाधिकैः पुरुषैः ॥११०॥

Water is surely present 20 cubits and 6 digits beneath the ground where ever a tree has a frog one cubit below the soil on which it is situated. (110)

उत्तरतश्च मधूकादहिनिलयः पश्चिमोत्तरे तोयम् ।
परिहृत्य पञ्चहस्तानर्धाष्टमपौरुषं वाच्यम् ॥१११॥

If there be the abode of a serpent towards the north of a Madhuka tree, then 5 cubits away towards the north and west of the place (on which the tree is situated) 38 cubits and 6 digits below the ground, water is sure to be found. (111)

अहिराजः पुरुषेस्मिन्धूमा धात्री कुलत्थवर्णोश्मा
माहेन्द्री वहति शिरा भवति सफेनं सदा तोयम् ॥११२॥

The ground 4 cubits below which a king serpent, earth of ashy colour and stone of the colour of Kulattha are to be found, there a vein of water flowing to the east is to be found below the ground, the water of which is always full of foam. (112)

सर्पावासः पश्चाद्यदा कदम्बस्य दक्षिणेन जलम् ।
पुरतो हस्तत्रितयात्षड्भिः पुरुषैस्तुरीयोनैः ॥११३॥

Where there is the abode of a serpent towards south-west of a Kadam̐ba tree, there towards the east, 3 cubits away, 27 cubits below the ground profusion of water is to be found. (113)

वल्मीकसंवृतो यदि तालो वा भवति नालिकेरो वा ।

पश्चात्षड्भिर्हस्तैर्नरैश्चतुर्भिः शिरा यस्य ॥११४॥

Where there is to the west, 6 cubits away from the place (on which the tree is located) a palmyra, or a coconut tree surrounded by anthills, 18 cubits beneath the ground a vein of water flowing to the west is sure to be found. (114)

अश्मातकस्य वामे बदरी वा दृश्यतेहिनिलयो वा ।

षड्भिर्ह्वास्य करैः सार्धं पुरुषत्रये तोयम् ॥११५॥

Where to the left of a Aśmāntaka tree, either a Badari tree or the abode of a serpent is to be found, there 6 cubits away towards the west 15 cubits and 18 digits below the ground water is to be found. (115)

कूर्मः प्रथमे पुरुषे पाषाणो धूसरः ससिकता मृद् ।

आदौ शिरा च याम्यां पूर्वोत्तरतो द्वितीया च ॥११६॥

Where 4 cubits below the soil a tortoise, stone of ashy colour, and soil mixed with sand are to be found, there beneath the ground a vein of water flowing to the south is to be found too, and a little to the north east thereof another vein of water is to be found. (116)

जलरहिते यदि देशे चिह्नान्यनूपजानि दृश्यन्ते ।

वीरणदूवा हरिता यत्र हि तस्मिञ्जलं पुरुषे ॥११७॥

Where in a waterless (dreary) tract signs of watery region are found, and where Virāṇa and Durvā are seen, there 4 1/2 cubits below the ground water is to be found too. (117)

तिलकाम्रातकवरुणकभल्लातकबिल्व तिन्दुकाङ्गोलाः ।

पिण्डीरशिरीषाञ्जनपुरुषक वज्रुलातिबलाः ॥११८॥

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एते यदि सुस्निग्धैर्वल्मीकैः परिवृतास्ततस्तोयम् ।

हस्तैस्त्रिभिर्हृत्तरतश्चतुर्भिर्धनेन च नरस्य ॥११९॥

If wet anthill is to be found beneath any of these trees: Tilaka, Amrataka, Varunaka, Bhallataka, Bilva, Tinduka Añkola, Piñdira, Śirisha, Añjana, Parushaka, Vañjula, Atibala - then to the north thereof 3 cubits away 20 cubits and 6 digits below the ground there is water. (118-119)

अतृणे सतृणा यस्मिन् सतृणे तृणवर्जिताः मही यत्र ।

तस्मिन् शिरा प्रदिष्टा वक्तव्यं वा धनं तत्र ॥१२०॥

Where in the midst of grassless ground a grassful spot is to be found, and vice versa, there is water below the surface. (120)

कण्टकाकण्टकानां व्यत्यासेम्भस्त्रिभिः करैः पश्चात् ।

खात्वा पुरुषत्रितयं त्रिभागयुक्तं धनं वा स्यात् ॥१२१॥

If a thorny tree is to be found in the midst of a number of trees without thorns, then if one digs the ground there 3 cubits away to the west, one is sure to find water or riches 15 cubits below the soil. (121)

वृक्षस्यैका शाखा यदि विनता भवति पाण्डुरा वा स्यात् ।

विज्ञातव्यं शाखाप्रतले नीरं त्रिपुरुषं तु ॥१२२॥

If the branches of a tree are bent down or of yellow colour, then 13 and half cubits below the soil, under the top part of the branches water is sure to be found. (122)

फलकुसुमविकारो यस्य तस्य पूर्वे शिरा त्रिभिर्हस्तैः ।

भवति पुरुषैश्चतुर्भिः पाषाणाधः क्षितिः पीता ॥१२३॥

If earth and stone of yellow colour are to be found 18 cubits beneath the soil, lying 3 cubits away to the east of a tree which has developed signs of disease in its fruits and flowers - there water is to be found beneath its surface. (123)

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यदि कण्टकहीना स्यान्निदिग्धिका शुभ्रपुष्पसंयुक्ता ।

तस्यास्तलेम्बु वाच्यं त्रिभिर्नरैरर्धपुरुषे वा ॥१२४॥

If a Kanṭakāri plant with flowers of white colour is found thornless, then 2 cubits 6 digits beneath the soil, or 13 cubits beneath thereof, water is to be found. (124)

खर्जुरी द्विशिरस्का यत्र भवेज्जलविवर्जिते देशे ।

तस्याः पश्चिमभागे निर्देश्यं त्रिपुरुषैर्वारि ॥१२५॥

If in a waterless ground a date tree with 2 heads is to be found, then to the west of ground, 13 cubits beneath the surface water is to be found. (125)

यदि भवति कर्णिकारः सितकुसुमः स्यात्पलाशवृक्षो वा ।

सव्येन तत्र हस्तद्वयेम्बु पुरुषत्रये भवति ॥१२६॥

If a Karṇikāra tree with white flowers, or a Palāśa tree is to be found, then to the north of the ground on which these are located, 15 cubits beneath the soil there is water. (126)

ऊष्मा यस्यां धात्र्यां धूमो वा तत्र वारि नरयुगले ।

निर्देष्टव्या च शिरा महता वारिप्रवाहेण ॥१२७॥

The ground which is always warm, or out of which smoke seems to come out, 9 cubits beneath thereof a vein of water full of strong current is to be found. (127)

यस्मिन् क्षेत्रोद्देशे जातं शस्यं विनाशमुपयाति ।

स्निग्धमतिपाण्डुरं वा महाशिरा नरयुगे तत्र ॥१२८॥

The ground where the corn becomes of yellow colour while unripe and dies away, there 9 cubits beneath the soil a strong vein of water is to be found. (128)

मरुदेशे भवति शिरा यथा तथातः परं प्रवक्ष्यामि ।

ग्रीवा करभाणामिव भूतलसंस्था शिरा याति ॥१२९॥

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पूर्वोत्तरेण पीलोयदि वल्मीको जलं भवति पश्चात् ।

उत्तरगमना च शिरा विज्ञेया पञ्चभिः पुरुषैः ॥१३०॥

Then we are describing the signs of vein of water in the desert:
If an anthill of yellowish colour is to be found in the north-east
of a desert then in the west, which is like a hot spring, water is
to be found. (129-130)

चिह्नं दर्दुर आदौ सत्कपिला तत्परं भवेद्धरिता ।

भवति च पुरुषं वाश्मा तस्य तले परि निर्देश्यम् ॥१३१॥

The soil where first a frog and then earth of yellow colour, and
then 1 1/2 cubits below heat is felt, there beneath the ground
water is sure to be found. (131)

बदरीरोहितवृक्षौ संपृक्तौ चेद्विनापि वल्मीकात् ।

हस्तत्रयेम्बू पश्चात् षोडशाभिर्मानवैर्भवति ॥१३२॥

The ground where a Badari tree is found adjacent to a Rohita
tree, there even in absence of an anthill 3 cubits away in the west
and 94 1/2 cubits below the ground water is to be found. (132)

सुरसं जलमादौ दक्षिणे शिरा वहति चोत्तरेणान्या ।

पिष्टनिभः पाषाणो मृच्छेता वृश्चिकोधनरे ॥१३३॥

The ground where first a serpent is to be found 2 cubits and 6
digits below, then soil of white colour and then stone of the same
colour, there in the north thereof a vein of water flowing to the
south is to be found. (133)

सकरीरा चेद्वदरी त्रिभिः करैः पश्चिमेन तत्राम्भः ॥

अष्टादशभिः पुरुषैरैशानी बहुजला च शिरा ॥१३४॥

If a Karira plant is to be found beneath a Badari tree, then 3 cubits
away to the west, 81 cubits below the ground a vein of water
flowing to north-east is to be found, a vein which has a profusion
of water. (134)

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ककुभकरीरावेकत्र संयुतौ ककुभबिल्वौ वा ।

हस्तत्रयेम्बू पश्चान्नरैर्भवत्येकविंशत्या ॥१३५॥

The desert where Kakubha and Karira, or Kakubhá and Bīlva, trees are seen very near one another there in the west 3 cubits away, 94 1/2 cubits below water is to be found. (135)

वल्मीकमूर्धनि यदा दूर्वा दर्भाश्च पाण्डुराः सन्ति ।

कूपो मध्ये देयो जलमत्र नरैकविंशत्या ॥१३६॥

If over an anthill grasses of yellow colour and Durvā are to be found, and one digs a well between the two then 189 cubits below the ground water is to be found. (136)

ग्रन्थिप्रचुरा यस्मिन्शमी भवेदुत्तरेण वल्मीकः ।

पश्चात्पञ्चकरान्ते शतार्धसंव्यैर्नरैः सलिलम् ॥१३७॥

Where an anthill is to be found to the north of a Śami tree with knots (tubercles) all over its body, there 5 cubits away to the west, 225 cubits below the ground water is sure to be found. (137)

जम्बू त्रिवृता श्यामा शिशुमारी शारिवा शिवा दूर्वा ।

वीरुधयो वाराही ज्योतिष्मती गरुडवेगा च ॥१३८॥

Jambū Trivṛtā, Śyāmā, Śiśumāri, Śarivā, Śivā, Dūrvā: all these gulmas; or such trees as Vārāhi, Jyotishmati, Garuḍavegā, Śūkarikā, Māśalātā, Vyāghrapadā, - if any of these is to be found on stony ground, then 3 cubits north of the anthill adjacent thereto, 13 1/2 cubits below the ground water is to be found. (138-139)

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सूकरिका माषलता व्याघ्रपदा चेति यद्यहेर्निलये ।

वल्मीकादुत्तरतः करैस्त्रिपुरुषागतं तोयम् ॥१३९॥

एतदनूपे वाच्यं जाङ्गलभूमौ च पञ्चभिः पुरुषैः ॥

एतैरेव निमित्तैर्मरुभूमावष्टभिः कथयेत् ॥१४०॥

The above rule (as laid down in 138-139) applies to mountainous regions of Anūpa country, but in accordance with the spirit of this formula even in the mountainous grounds of Jāṅgala region water is to be found 30 1/2 cubits below the surface, and in the case of a desert 36 cubits below. (140)

एकनिभा यत्र मही तृणतखल्मीकगुल्मपरिहीना ।

तस्यां यत्र विकारो भवति धरित्र्यां जलं तत्र ॥१४१॥

Where the ground is uniformly even and is devoid of grasses, trees, anthills and shrubs, if a change is noticed there in any of these, water is sure to be found below the surface. (141)

हस्ता मघानुराधापुष्यधनिष्टोत्तराश्च रोहिण्यः ।

शतभिषगित्यारम्भे कूपानां शस्यते भगणः ॥१४२॥

It is good to begin digging a well when the moon is in any of the constellation in the Zodiac: Hastā, Maghā, Anurādhā, Pushyā, Dhanishthā, Uttaraphalgunī, Uttarāshādhā, Uttara- bhādrapada, Rohiṇi and Śatabhishā. (142)

आग्नेये यदि कोणे ग्रामस्य पुरस्य वा भवति कूपः ।

नित्यं स करोति भयं दाहं च समानुषं प्रायः ॥१४३॥

The presence of a well in the south-east of a house or a village is productive of perpetual fear, and causes the conflagration of houses, as if by a human agent. (143)

नैऋतकोणे बालक्षयं च वनिताक्षयं च वायव्ये ।

दिश्यैशान्यां भीतिः शेषास्तु शुभावहाः कूपाः ॥१४४॥

A well in the south-west of a house or a village means loss of property to the inhabitants: one in north-west causes loss of

wives, and one in the north-east causes fear. The digging of a well anywhere else is propitious. (144)

या मेदिनी काशकुशैश्च युक्ता
नीला च मृद्यत्र मशर्करा च ।
तस्यां प्रणीतं मुरसं च तोयं
कृणाथवा यत्र च तिक्तमृत्स्ना ॥१४५॥

The water below the surface of the ground which is full of Kaśa and Kuśa grass, or where the earth is of blue colour, or full of fine gravels, or the earth is black and pungent to the taste, is sure to be both tasteful and sweet. (145)

मशर्कराभा तु मही कषायं
क्षारं धरित्री कपिला करोति ।
अपांडुरायां लवणं प्रदिष्टं
मिष्टं पयो नीलवसुन्धरायाम् ॥१४६॥

There where the earth is yellowish and full of gravels and pungent to the taste, the water below the surface is caustic; where the earth is of any colour other than pale the water below the surface is salty, and the water is sweet where the earth is of blue colour. (146)

अथ पोषणविधिः ।

RULES FOR THE NOURISHMENT OF PLANTS

फलकमुमसंपदुचिता रोपणतो भवति केवलान्न यतः ।
पोषणविधिमथ ममतमनोकहानामतो वक्ष्ये ॥१४७॥

Trees do not produce fruits and flowers merely because they are planted; hence we are going to state the rules relating to the nourishment of plants as framed by the Sages. (147)

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खर्जूरबिल्वलकुचाः सितमर्षपेण
पिण्याकतश्च तुषवारिवशेन चाम्नाः।
ऐरावता निचुलपत्रजलोक्षणेन
सत्रीहिमांससलिलेन च यान्ति वृद्धिम् ॥१४८॥

If one applies powdered oil-cakes of white mustard or sesamum at the root of Kharjūra, Bilva and Lakucha trees, - all these three grow; and the mango tree grows if it is watered with water in which husks are soaked; Airāvata and Nichulapatra grow by simple watering, but they grow also if watered with flesh and paddy washings. (148)

प्राचीनामलकतरोः प्रिया हि माषाः
क्षीराम्भो हितमिह वालतिन्दुकानाम्।
प्रीयन्ते यवरजसा च नालिकेराः
सर्वेषां भवति रुचिर्हि निम्नभूमौ ॥१४९॥

For the (growth of) old Āmalaka trees the pulse māsha is extremely beneficial; for young Tinduka trees application of water and milk is very helpful; powders of barley help the growth of coconut trees; and all trees rapidly grow if in the planes. (149)

कुरङ्गकिटिसारङ्गशृगालश्वादिमेदसा।
क्थितेन सद्गुधेन पञ्चपल्लववारिणा।
कृतसेको भवेदाशु सहकारोऽतिसौरभः ॥१५०॥

Mango trees bear very fragrant and sweet fruits at an early date if they are watered with decoction of milk, pañchapallava, i.e., leaves of mango, Āsvattha, Vata, Plaksa and Yajñadruma, together with the fat of deer, boar, jackal, elephant, horse etc. (150)

घृतकुणपवचावराहविष्टा-
गलिलमतीव सुखाय दाडिमानाम्।
क्थितमथ कुलत्थचूर्णकं वा

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जलमपि वृद्धिकरं सदा शफर्याः ॥१५१॥

A decoction of clarified butter, kuṇapa water, vacha, and pig's stool - is extremely favourable to the development of fruits of Dādima trees. And water or decoction made up of powders of kulattha is favourable to the roots of the same tree. (151)

यस्त्रिफलाशफरीघृतलिसो

धूपित आद्यफलत्रयधूपैः।

आम्रफलैरिह दाडिमशाखी

तालफलानि विडम्बयतीव ॥१५२॥

If one, after besmearing the trunk of a pomegranate tree with Saphari fish and powders of triphalaa (fruits of Āmalaka, Haritaki and Bayeda), applies to its roots the powders of above three fruits and mango paste and also fumigates with frankincense, the fruit of the said tree is sure to be as large as the palmyra fruit. (152)

दधिमस्तुकाञ्जिकसुराबदरी-

तिलमेथिकाकुणपसीधुपयः।

फलिनीकदम्बकरिकेसरका-

नकुस्ते सुगन्धिबहुपुष्पयुतान् ॥१५३॥

If one waters a fruiting Kadamba or Nāgakeśara tree with the compound liquid made of curd, fermented rice water, wine made out of rice, plum, sesamem, methi, kuṇapa water and wine prepared from sugar and milk, they are sure to bear innumerable fragrant flowers. (153)

प्रियङ्गुआफलनिम्बपिप्पली-

र्वचाहरिद्रातिलसर्षपैः समैः।

घृताश्वकर्णाम्बु विलोड्य पायये-

त्सचम्पकं नागतरी मुवृद्धिदम् ॥१५४॥

If one fills the trenches around a Nāgakeśara or Champaka tree with the decoction made up of

pippali, vacha, haridrā, tila and sarshapa - all taken in equal parts together with clarified butter and broth of Aśvakarna (bark) they are sure to grow luxuriantly. (154)

सिक्ताम्भोभिः पललतुषयोः कुक्कुटानां पुरीषं
मूले दत्त्वा सकुसुमफला गोस्तनी वृद्धिमेति ।
स्कन्धन्यस्तैः पनसतरवोप्याशु पालालभारै-
मूलादग्रं दधति च वचावारिसिक्ताः फलानि ॥१५५॥

If one waters the roots of vine with the compound liquid made up of stools of fowls (flesh and fish), straw and husks of paddy, it bears fruit and flowers and grows; and if one compound 6 maunds and 10 seers of Garudi creepers with leaves and besmears the trunk of a jackfruit tree from top to foot with it and waters the roots of the said tree with the broth of vacha, - it bears fruits all over its body from head to foot. (155)

सर्पिर्गुडक्षीरमधूपचारं
दत्त्वा निषिक्तौ च कपित्थबिल्वौ ॥
पीयूषकल्पान्यतिमांसलानि
फलान्यनस्थीनि सदा दधाते ॥१५६॥

If a Kapittha or Bilva tree be watered with clarified butter, milk and honey, it bears fruits which are sweet to the taste, full of fleshy substance containing scanty number of seeds. (156)

कोशातकी दलशिफाकथितामिषाम्भः-
संषेचनाच्च सुकणारजसा च युक्तः ।
लब्धोपचारमथ धूपजलाभिषिक्तः
शोभां बिभर्ति नितरां कुसुमेर्मधूकः ॥१५७॥

A Madhuka tree puts on a beautiful and dignified appearance like a worshipworthy being when it is watered with the compound made up of the broth of roots and leaves of Kōṣātaki, Pippala, kuṇapa water, and powdered resin. (157)

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तिलयष्टिमधुक मधुभिर्मिश्रितजलसेकतर्पितावदरी ।

कुणपैरुपचितमूला फलति फलं शर्करामधुरम् ॥१५८॥

A plum tree bears fruits which are as sweet as sugar when its roots are developed through being watered with the decoction of Tila and Yashtimadhu and with kuṇapa water. (158)

अजैडकामूकरविड् विडङ्ग-

किण्वोपचारेण च बीजपूरः ।

भूयोश्वमूत्राविल वारिसिक्तः

फलानि धत्ते सुबहूनि शश्वत् ॥१५९॥

A Bījapūra tree bears fruits again and again when the compound substance consisting of the stools of goat, sheep, pig, etc. Vīḍaṅga and the stools of men, is applied to the roots and then these roots are watered with the urine of horses and sheep. (159)

वृश्चिककण्टकविद्धाः सुरभीघृतधूपिता हि निखिललताः ।

मूषककोलवसाभिः संसिक्ताः स्युः फलैर्नम्राः ॥१६०॥

All creepers are bent down under the weight of their fruits when their roots are pierced with the stings of scorpion and fumigated with clarified butter and watered with the fats of mice and pig. (160)

मुरभिजलनिषेकतो निदाघे

कूणपजलेन च केतकी निषिक्ता ।

जलधर समये सुगन्धसूची-

चरनिचितानि बिभर्ति पल्लवानि ॥१६१॥

A Ketaki tree if watered with the urine of cows and kuṇapa water in summer, bears fragrant flowers and sharp thorny leaves in the rainy season. (161)

यस्य कस्यापि पुष्पस्य सौरभेणाधिवासितान् ।

मृत्तिकाशकलान्मूले वृक्षाणां बहुलान् क्षिपेत् ॥१६२॥

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One should apply to the roots of all trees, in profusion, soil scented by fragrant flowers. (162)

कुष्ठपत्रमुरामुस्ततगराशीरचूर्णकैः ।

मिश्रितेनाम्भसा सेकान्मासं सौरभसंभवः ॥१६३॥

Any flowering tree bears fragrant flowers in the course of a month when watered with the liquid compound of the powders of Kustha, Patra, Murā, Musta, Tagara And Uśira. (163)

कुल्माषदन्तिदन्तानां चूर्णयुक्त्यङ्गमंभवा ।

प्रत्यहं पुष्पिताम्भोजमण्डिता पद्मिनी भवेत् ॥१६४॥

If one applies to the roots of a lotus plant which is barren, the compounded dust of kulattha and the tusks of elephants, it is sure to be graced with sweet lotuses every day. (164)

सिद्धार्थः कदलीदलानि शफरी विङ्कोलमार्जारयो-

रेतेषां समभागमाज्यमहितं चूर्णं तरुभ्यो हितम् ।

दत्तं धूपविलेपनोपचरणैरोप्यायनं रोगह-

च्छाखाः पल्लवयत्यलं मधुकरव्यालोलपुष्पच्छदाः ॥१६५॥

One applies to the roots white mustard, plantain leaf Safari fish stools of a pig and cat in equal parts mixed with clarified butter, besmears the trunks and fumigate them therewith, they (trees) become free from all diseases, grow luxuriantly and the branches become graced with flowers and a number of bees. (165)

धूपो घृतस्य समृदो यववारिमेको

नित्यं च दुग्धसलिलैः कुणपाम्बुभिर्वा ।

लेपो विङ्गगतिलकल्ककृतं शिशूनां

वृद्धिं करोति परमां खलु भूरुहाणाम् ॥१६६॥

A Sisoo tree grows very luxuriantly if one, after fumigating it with barley, wine, fermented rice water and clarified butter, besmears its trunk with cakes made up of Vidaṅga and sesamum bathed either in milk or kunapa water (166)

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अङ्गोलकाथतोयेन मिश्रितं घृतमाक्षिकम् ।

वसा किटिकुरङ्गानामेतैः सिक्ता महीरुहाः ॥१६७॥

सिद्धार्थकफलोपेताः सर्वदा फलशोभिताः ।

जायन्ते पुष्पपत्राढ्याः सच्छाया रोगवार्जिताः ॥१६८॥

All trees without exception always become graced with an abundance of fruits and leaves and flowers, become immune to diseases and afford pleasant shades if one applies to them the decoction of Aṅkola flower mixed with clarified butter and honey, fats of deer and boar added thereto, powders of white mustard, and well watered. (167-168)

यष्टिमधूकपुष्पाणि सिता कुष्टं समाक्षिकम् ।

निक्षिप्य गुलिकाः कृत्वा मूले सर्वत्र निक्षिपेत् ॥१६९॥

One should make a paste of Yashtimadhu, Madhūka flowers, white Kuṣṭha and honey, make them into pills and scatter them around the roots of all trees. (169)

दुग्धसेकं च वृक्षस्य यस्य कुर्याद्विचक्षणः ।

फलं सुनिश्चितं तस्य मधुरं जायते भृशम् ॥१७०॥

Any fruiting tree verily bears very sweet fruits if any experienced or wise man waters its roots with milk. the fat of pig and porpoise, and then sown in earth and sprinkled over with spring water, it sprouts in no time. (170)

अथ कुणपजलम् ।

THE NOURISHING SOLUTION

कुरङ्गकिटिमत्स्यानां मेषच्छागलखड्गिनाम् ।
मांसं ग्राह्यं यथालाभं मेदोमज्जावसास्तथा ॥१७१॥
तान्सर्वानेकतः कृत्वा वह्नौ नीरेण पाचयेत् ।
संपक्वं हि क्षिपेद्भाण्डे तत्र दुग्धं च निक्षिपेत् ॥१७२॥
चूर्णीकृत्य खलिर्देया तिलानां माक्षिकं तथा ।
स्विन्नांश्च सरसान्माषास्तत्र दद्याद्धृतं तथा ॥१७३॥
उष्णं जलं क्षिपेत्तत्र मात्रा नास्तीह कस्यचित् ।
पक्षैकं स्थापिते भाण्डे कोष्णस्थाने मनीषिणा ।
कुणपस्तु भवेदेव तरूणां पुष्टिकारकः ॥१७४॥

One should boil the flesh, fat and marrow of deer, pig, fish, sheep, goat and rhinoceros in water, and when it is properly boiled one should put the mixture in an earthen pot and add into the compound milk, powders of sesamum oil-cakes, masha (pulse) boiled in honey, the decoction of pulses, clarified butter and hot water. There is no fixity as to the amount of any of these elements; when the said pot is put in a warm place for about a fortnight the compound becomes what is called Kunapa Water which is very healthy (for plants in general). (171-174)

अथ तरुचिकित्सा ।

TREATMENT OF PLANTS

नराणामिव वृक्षाणां वातपित्तकफाद्रदाः ।
संभवन्ति निरूप्यातः कुर्यात्तदोषनाशनम् ॥१७५॥

Trees, like men, get diseases through the affections of vāta (wind), pitta (bile) and kapha (phlegm)- the three pathological

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humours. One should diagnose the diseases through their symptoms and cure them radically. (175)

कीटजग्धेग्निसंप्लुष्टे वातभग्नैश्च निक्षते ।

वृक्षे छेदोपचारादिपीडिते च पृथक्क्रिया ॥१७६॥

When a tree is consumed by insects, burnt by fire, broken by storm, struck by thunderbolt- one should cut away the affected parts; but in case of diseases the operation is to be of a different nature. (176)

कृशदीर्घो लघुरूक्षो निद्राहीनोल्पचेतनः ।

न धत्ते फलपुष्पाणि वातप्रकृतिकस्तरुः ॥१७७॥

Tall, thin, short, sleeping or partly conscious trees are of windy humour. They do not bear flowers and fruits. (177)

आतपासहनः पाण्डुः शाखाहीनो मुहुर्यदि ।

अकालफलपाकी स्याच्छाखी पित्तात्मकः स्मृतः ॥१७८॥

Trees of bilious temper cannot bear the rays of the sun, are of yellow colour, and shed their branches over and over again, and bear premature fruits. (178)

स्निग्धशाखादलः शाखी सम्यक्पुष्पफलोज्ज्वलः ।

लतापरीतगात्रस्तु कफवान्परिमण्डलः ॥१७९॥

Trees of phlegmatic temper have their branches and leaves very glossy, flowers and fruits well shaped and of good appearance, trunks symmetrical, and all parts covered with creepers. (179)

कटुतिक्तकषायरसैः पवनः पित्तं कटूष्णलवणाम्लैः ।

स्निग्धमधुराम्ललवणैः श्लेष्मा कोपं प्रयाति तरोः ॥१८०॥

Substances of pungent, bitter or caustic tastes are destructive of the windy humour of trees; and those having bitter, hot, salty and acid juice are destructive of the bile, and those with graceful, sweet, acid or salty juice are destructive of the phlegm. (180)

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सुस्निग्धैः पिशितरसैः प्रयाति वातः

सुस्निग्धैर्मधुरहिमैर्जलैश्च पित्तम् ।

कटुमैरहिमजलैः कषायरूक्षैः ।

श्लेष्मापि क्रमविहितैः प्रयाति नाशम् ॥१८१॥

The affections of windy humour are alleviated through the application of graceful things like clarified butter mixed with flesh juice; the affection through the bile is alleviated through the application of things that are cold and graceful mixed with water, and the affection through phlegm is modified through the application of acid things mixed with hot water, or through pungent and bitter things. (181)

रौक्षं ग्रन्थिः कुटिलता वातादृक्षस्य जायते ।

गोविड् लोध्रवसाकुणपजलैस्तज्जयो भवेत् ॥१८२॥

Rudeness of appearance, tubercles (nodules over the body) both of large and small size are due to windy humour which may be overcome up the application of Lodhra flower, cowdung, fats and kunapa water. (182)

दोषैर्यस्य विना प्रवालकुसुमम्लानिर्विरूढं वपुः

मूले तस्य तरोर्भवन्ति क्रिमयो यन्नाच्च तानुद्धरेत् ।

गोमूत्राज्यबिडङ्गसर्षपतिलोर्लिप्तः प्रणष्टैस्ततः

सिक्तः क्षीरजलैरुदेति सहसा धूपैश्च धूपायितः ॥१८३॥

One should do well to realise that worms are at roots of plants affected with tubercles, or of plants for the paleness of buds and flowers of which no other particular cause can be assigned; and one should do well to root out these worms with care. If now fresh urine of cows, clarified butter, Vidaṅga, mustard and sesamum are mixed together and applied to the trunk, then fumigated and watered with milk and water, they (these plants) grow. (183)

कराञ्जारग्वधारिष्टसप्तपर्णात्वचाकृतः ।

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उपचारः क्रिमिहरो मूत्रमुस्तविडङ्गवान् ॥१८४॥

All kinds of worms are destroyed if one applies to the roots of trees the barks of Karañja, Āragvada, Arishta, Saptaparna- pasted in the urine of cows together with Vidaṅga and Musta. (184)

कुणपजलपयोनिषिक्तमूलः

सरसिजकन्दविलिप्तसर्वगात्रः ।

तरुनलहतो बिभर्ति भूयो

मरकतरङ्गहरिन्ति पल्लवानि ॥१८५॥

The bodies of trees burnt with fire when besmeared with lotus bulb pasted with kuṇapa water and milk, bear leaves as bright as marakata jewels. (185)

प्लक्षार्कोदुम्बरत्वग्घृतमधुमधुरोच्छिष्टदुग्धैर्विलिप्तः

स्तम्भैरुत्तम्य रज्ज्वा परिकलितवपुः पूरितः प्लक्षमृद्धिः ।

सिक्तः क्षीरेण भूयो जलभरिततलश्चण्डवातादिभग्नः

स्वस्थो भूत्वाङ्घ्रिपायी कुसुमफलभराण्यातनोति प्रकामम् ॥१८६॥

One should besmear the branch of a tree broken by wind with the barks of Plakṣa, Arka and Udumbara trees pasted in ghee, honey and beeswax mixed with milk; should set it (the broken parts) as before, and tie it to a post fixed nearby, and apply finely powdered earth to the fractured part. And if it be sprinkled with milk over and over again, and (the plant) watered at the root, the tree gets round and produces abundance of flowers and fruits. (186)

वृक्षस्याशनिदग्धस्य जीवनं शृणु भेषजम् ।

घनोशीरमधूकैश्च मुद्गमाषान् यवांस्तिलान् ॥१८७॥

पिष्ट्वा क्षीराम्बुसंयुक्तैः सेचयेत्तमभीक्षणशः ।

स सेकाप्यायितः शीघ्रं प्रकृतिस्थो भविष्यति ॥१८८॥

The treatment of trees struck by lightning is being given here; Ghana (musta). Uśira, Madhūka, Mudga, Māsha, Yava and Tila

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pastes with milk and water,- when applied to the roots of (such a tree, it is eased and becomes normal. (187-188)

जनयित्वा फलकुसुमं यः पुनरुपयाति बन्ध्यतां शाखी
सक्षीरैः कुणपजलैर्भूयः सिक्तः फलत्येव ॥१८९॥

The trees which get at dotage through repeated production of fruit and flowers, when bathed (treated) in kunapa water and milk again and again do surely bear fruit. (189)

असेकतोत्यन्त निषेकतश्च

शाखाविशेषं फलिनो निरूप्य ।

सप्ताहमात्रं सूतमेव सर्पि-

विडङ्गदुग्धाम्बु निषेचनीयम् ॥१९०॥

When the branches of a tree become dry owing to excess or want of application of water, one should boil Vidaṅga, clarified butter and milk together, and sprinkle the tree with the mixture for a week. (190)

उन्निद्रता मत्स्य सगन्धिता च

प्रवालहानिः सपिपीलिकत्वम् ॥

त्वग्भ्रंशनाद्वारिकृतादजीर्णा-

तरोर्भवेत्तत्र चिकित्सनीयम् ॥१९१॥

When a tree suffers from incapacity to digest water, it is always pale, devoid of leaves, full of ants and the smell of fish, and in places devoid of barks. The following treatment has to be adopted in this case. (191)

तन्मूलशूलं परशुप्रहारै-

र्विक्षावितं दोषरसं निहत्य।

क्षौद्राज्यजन्तुघ्नतिलैः प्रलितं

मृत्पूरितं दुग्धजलैर्निषिञ्चेत् ॥१९२॥

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शर्करातिलगोक्षीर वारिमेकात्तथा तरोः ।

शोषः शाम्यति वृक्षस्य लेपाद्धपोपचारतः ॥१९३॥

One should strike at the root of the tree suffering from indigestion to draw the poisonous sap out of the trunk, apply to the affected place a paste of honey, Vidaṅga powder and sesamum and cover it with earth and sprinkle it with water and milk. The atrophy (sosha) of a tree is radically cured if it is besmeared with the said paste after it has been sprinkled with sugar and sesamum mixed with milk and water and then fumigated. (192-93)

प्रियङ्गुवरककारिवेतसार्जुनवल्कलैः ।

क्षीरसिद्धैर्विलिप्तानां स्रावः शाम्यति शाखिनाम् ॥१९४॥

Exudation of trees is stopped if one applies to it the barks of Priyaṅgū, Vara, Karkāri, Vetasa and Arjuna pasted with and boiled in milk. (194)

BOTANICAL MARVELS

अथ विचित्रकरणम् ।

वृक्षायुर्वेदफलं मनोहरं शाखतः सिद्धम् ।

नानाविधानचित्र चित्रीकरणं प्रवक्ष्यामि ॥१९५॥

The subject matter of the Vṛkshāyurveda is not to be found any where outside the scriptures. Let us here deal with some botanical marvels. (195)

सुरभिसुमनोलब्धामोदां निधाय च मृत्तिकां

धवखदिरयोः काथाम्भोभिः सुगन्धिभिरुक्षणात् ।

मलयजरजोलेपाद्धूपाद्धृतस्य च भूरुहां

व्रजाति कुसुमं निर्गन्धानामतीव सुगन्धताम् ॥१९६॥

If one applies to the root of a tree bearing scentless flowers, earth (soil) scented (through association) with fragrant flowers, and then sprinkle it with decoction of Dhava and Khadira barks,

and besmears it with sandal dust and then fumigates it with clarified butter and frankincense, it bears very fragrant flowers. (196)

यवतिलनिशापलाशैरुपचितमूला तदम्बुसिक्ता च ।

ज्वलदनलोपममसकृत्कर्पासी तूलकं सूते ॥१९७॥

When one applies barley, sesamum, Niśā and powdered bark of Palāśa tree to the root of a cotton tree, and sprinkles it with the decoction made up of those things it yields fibres, as red as burning fire. (197)

शाल्मलीत्वग्निशानीलीत्रिफ कुष्टमीधुभिः ।

सकृल्लेपोपचारेण शुक्लपक्षनिभं भवेत् ॥१९८॥

If barks of Sālmali, turmeric, indigo, triphalā (three fruits), kusha and rock salt be powdered and mixed with wine, and be applied to the roots of a cotton tree, it yields fibres as yellow as the feather of a Śuka bird. (198)

मञ्जिष्ठातिलयवपीतसारमारै-

जीवन्तीदलसहितैर्मनः शिलाजैः ।

गोजाविप्रचुरपयः सृतैर्वेलिप्ता

कर्पासी प्रसवति तूलकं खनीलम् ॥१९९॥

If mañjishṭha, tila, yava, pitasāra, leaves of Jīvanti, powdered Manasīla (mineral) be pasted together with the milk either of cow or goat, applied to the roots of a cotton tree, it produces fibres as blue as the sky. (199)

संपक्वे क्षुरसविदारिकन्दकविलिप्तमूलभागस्य ।

सिक्तस्येक्षुरमेन च तरोरकाले भवेत् कुसुमम् ॥२००॥

If the cut stem of a tree (cuttings) be besmeared with boiled sugarcane juice, and sugar-cane juice be applied to its roots, it bears flowers out of season. (200)

तिलखलिविडङ्गगोमयविनोडितेक्षुरससेचितस्य तरोः ।

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फलकुसुममकालभवं मनोहरं फलति लोकस्य ॥२०१॥

If sesamum oil-cakes, Vidaṅga, and cowdung be applied to the root of a tree, and is sprinkled with sugar-cane juice, it produces flowers out of season which are very pleasing to all men. (201)

मधुयष्टिसिताकुष्ठ मधुपुष्पविनिर्मितैः ।

मोदकैश्छादिते मूले निरस्थि स्यात्फलं तरोः ॥२०२॥

If Yaśṭimadhu, sugar, Kuṣṭha, flowers of Madhūka be pasted together and applied to the root of a tree it produces fruit without seeds within. (202)

मधुककुमुमगुञ्जाशर्करोदुम्बराज्यं

समधु निहितमन्तः काण्डमुत्कीर्य बद्धा ।

उपरि च परिलिप्तं वत्सविड्भिस्तरूणां

जनयति फलमेतत्स्वादुसेकादनस्थि ॥२०३॥

One should cut a big disc of bark from the trunk of a tree so as to make a hole fit enough for taking in medicine, fill it up with the flowers of Madhūka, Guñjā, Sarkarā, ripe Udumbara and honey, and then replace the said disc and besmear the affected parts with the dung of calves, bind it and apply to it any sweet liquid; (if this is done) the tree is sure to bear stoneless fruits. (203)

तत्कालनिहितस्योच्चैश्छागस्य स्कन्धचर्मणा ।

बद्धायां वृक्षशाखायां फलपाको न जायते ॥२०४॥

If the branches of a tree are well wrapped with the neck – skins of goats recently killed, its fruits never ripen. (204)

करि वरमृदितबलीमुखनलकैर्मूलेषु कीलितस्य तरोः ।

संवत्सरं च यावत्फलितस्य फलानि जायन्ते ॥२०५॥

If the root of a tree is pierced (injected) with the gullet of the monkey that has been rubbed with the exudation of an elephant, its fruits do not ripen within a year of the process. (205)

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बद्ध्वा चर्मतृणाभ्यां विडङ्गमधुदुग्धलेपितोल्लिख्य ।

शाखा पयोम्बुसेकाच्चिरमपि पक्वं फलं धत्ते ॥२०६॥

If the branch of a tree is wrapped in straw and leather, and is pasted over with Vidaṅga, honey and milk, and if milk and water are sprinkled over it, it bears ripe fruits for a long time to come. (206)

मीनकोलवसामांसदुग्धसेकेन धूपतः ।

सर्वबीजानि साश्चर्यमुत्तिष्ठन्ति फलन्ति च ॥२०७॥

All kinds of seeds marvelously sprout and fructify when sprinkled with the decoction of fish, pig's flesh, fat and milk compounded together, and then fumigated. (207)

अङ्कोलतैलसूकरशिशुमारवसासु भावितं 'बीजं' ।

सद्यो रोहति निहितं भूमौ करकाम्भसा सिक्तम् ॥२०८॥

If a seed is repeatedly bathed in oil extracted out of the Aṅkola fruit mixed with the fat of pig and porpoise, and then sown in earth and sprinkled over with spring water, it sprouts in no time. (208)

बीजमाम्रादिवृक्षाणां पक्वं मीनफलाम्बूनि ।

अङ्कोलतैलदुग्धाज्ये निहितं वृहतीभवेत् ॥२०९॥

भस्मन्यामेलितं शुष्कमुत्तमुद्भिद्यते सह ।

फलेनाशेषलोकस्य कृतकौतुकमञ्जसा ॥२१०॥

The seeds of mango and other trees if bathed for a long time a decoction of fish, vidaṅga, Aṅkola oil, milk and clarified butter and then sown, the trees that sprout of them assume gigantic size. And if that seed is repeatedly rubbed with the ashes of cowdung dried and sown, a fruitful tree which sprouts from it, becomes delightful to all. (209-210)

एकविंशतिवारेण कुक्कुटस्यासृजोक्षितम् ।

तत्क्षणाद्वाडिमीबीजं वर्द्धते फलति ध्रुवम् ॥२११॥

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If pomegranate seeds are treated 21 times in the blood of hen, within a short time trees sprout out of them and fructify (when sown). (211)

मत्स्यकोलवसामांसचणकक्षारभावितम् ।

यस्य कस्यापि वा बीजं ध्रुवं पुष्पफलं भवेत् ॥२१२॥

The seeds, that are treated with the compound made up of fish, pig's fat flesh and ashes of gram when sown develop very soon into trees full of flowers and fruits. (212)

स्कन्धतः समन्ततः मूकरास्थिभिर्दृढम् ।

कीलितो न संशयं नाशमेत्यनोकहः ॥२१३॥

The tree whose trunk is strongly pierced in all directions with bones of pig, never dries or perishes. (213)

कुलत्थकाथ तोयेन तरुः पुष्पफलं त्यजेत् ।

किशुकार्जुनतर्कारीलवणाम्बूक्षणेन च ॥२१४॥

A tree becomes devoid of fruits and flowers if sprinkled over with the decoction made up of kulattha, or that made up of Palāśa, Arjuna and Tarkārī together with salt. (214)

नानावर्णैर्घटितं कन्दं कुमुदस्य सूत्रसंघटितम् ।

घृतमधूविलिप्तमुसं सूते कुसुमं तथावर्णम् ॥२१५॥

If bulbs are wrapped with fibres of water-lily, and their roots besmeared with honey and clarified butter variously coloured, and then sown, the flowers that grow out of them correspond to the colour of the clarified butter and honey. (215)

माहिषकरीषमूत्रैर्मृदितविशुष्कं दिनानि यत्सप्त ।

कुमुदफलबीजमुसं जनयति करवीरविटपं तत् ॥२१६॥

If the seeds of water – lily are rubbed with the stools and urine of buffalo, dried for seven days and sown, out of them sprout Karavīra trees. (216)

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कूष्माण्डवार्ताक पटोलकादि-
बीजं वसाभावितमुत्तसिक्तम् ।
विशोधितायां भुवि सर्वकालं
फलान्यनस्थीनि महान्ति धत्ते ॥२१७॥

If the seeds of gourd, brinjal, paṭola and such plants be treated with fat and then sown in purified (prepared) ground, and water be sprinkled over them, the fruits that grow out of them become big and seedless. (217)

वार्ताकबीजं धृतमाक्षिकार्क-
विशोषितं गोमयलिसरन्ध्रे ।
बालस्य कूष्माण्डफलस्य तप्तं
पक्वाद्गृहीतं फलितं महत्स्यात् ॥२१८॥

If one digs a deep pit and besmears the bottom of it with cowdung and sow in it the seeds of Brinjal rubbed with honey and ghee, dried in the sun and bathed in the juice of green gourd, the plants that grow out of them when bear abundant fruits. (218)

मन्दारद्रुमरन्ध्रे या कौष्मांडी निर्गतालता ।
मृद्ङ्गोमयघृते तस्मिन् सिक्ते फलति सा सदा ॥२१९॥

If earth (soil) and cowdung and ghee compounded together be applied to the root of a gourd creeper coming out of the hole of a Mandāra tree, it always bears fruits. (219)

सूकरासृग्वासिक्तमङ्कोलतैलभावितम् ।
एरण्डबीजं कारञ्जीफलं सूतेति कौतुकम् ॥२२०॥

If Castor seeds be bathed in the fat and blood of pigs and treated in Aṅkola oil and sown, Kārañji fruits grow out of them, which is really a wonder. (220)

खरतुरगबिड् निवेशिततापितया या शलाकया मूले ।
तिर्यग्विद्धा कदली फलति फलं करिकराकारम् ॥२२१॥

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If one thrusts a rod in the stool of ass and horse and then heat it on fire, and then pierce it slantingly into the trunk of a plantain tree, the fruits that tree will produce will be as big as the trunk of an elephant. (221)

कोलशोणितमेदोभ्यामङ्गोलकथितेन च ।

सिञ्चिता कदली सूते दाडिमीफलमुत्तमम् ॥२२२॥

If one sprinkles the infusion of the blood and fat of boar and Añkola oil over a plantain tree it bears pomegranate fruits. (222)

नरमांसवसारक्तदन्तिदन्तविचूर्णितैः ।

मिश्रितेनान्भसा सिक्ता रम्भा चूतफला भवेत् ॥२२३॥

When a plantain tree is sprinkled over with the flesh, fat and blood of man, and the powders of elephant's tusks dissolved in water it produces mango fruits. (223)

अङ्गोलकथितं स्विन्नं नृमांसं छागदुग्धयुक् ।

पिण्याकसहितं मूले सहकारस्य निक्षिपेत् ॥२२४॥

द्राक्षावल्लीसमाकारः सहकारः सदाफलः ।

जायते निश्चितं धत्ते सर्वेषामद्भुतं यदि ॥२२५॥

If one applies to the root of a mango tree broth of human fish and Añkola oil mixed with goat's milk and sesmum paste, it always bears fruits abundantly like vines, which is certainly a thing of wonder. (224)

शशकूर्मासृग्मध्ये बहुभावितमाम्रजं बीजम् ।

खण्डं सिक्तं दुग्धैः फलति फलं सर्वकालेषु ॥२२६॥

If mango seeds be repeatedly treated in the blood of hare and tortoise and if milk be sprinkled over the trees that grow out of them, they always bear fruits.

क्रिमिरिपुयक्षयघ्नीमधुगुडदुग्धविलेपनेन निम्बतरुः ।

भवति जलदुग्ध सिक्तः स्वभावतस्कोपि मधुरफलः ॥२२७॥

(226)

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If one applies to the Nimba tree which is naturally of bitter juice, the paste made up of Vīḍaṅga, Yaśṭīmadhu, molasses and milk and sprinkle it with water and milk produces sweetness. (227)

बीजं नरपलाङ्गोलतैलस्विन्नं शुभं सदा ।

उद्बच्छति मृदा पूर्णमम्भःक्षितं करे क्षणात् ॥ २२८ ॥

Whatever seeds one sows, when treated with human flesh and Aṅkola oil with water at the time of sowing, and sprinkled some water over them, they always produce good fruits. (228)

अङ्गोलतैलभावितमुषितं गोशकृति कुमुदकन्दमूलम् ।

करकाम्बुकर्दमभृते कलशे कुसुमं समुद्बहति ॥ २२९ ॥

One should treat the bulbs of water-lily in Aṅkola oil, and keep it in cowdung for some time, and then put it in a water – pot full of hail water and mud, then flowers will surely come out of them. (229)

गोकोलास्थिकरीषैस्तु दग्धे गर्ते विशोधिते ।

उसं च बालुकापूर्णे मूलकं गर्तवद्भवेत् ॥ २३० ॥

230..

One should purify (treat) a pit with burnt powders of the bone and dung of cow and pig, then fill the pit with sands and sow the seeds of radish in it, and the radish will be as big as the pit. (230)

इष्टकचिते समन्तात्पुरषनिखाते वटे तरुर्जातः

वामन एव हि धत्ते फलकुसुमं सर्वकालमिति ॥ २३१ ॥

If one digs a pit in the ground with bricks all around. 4 1/2 cubits deep, and plants a tree in it (pit), it (the tree) always remains dwarfish and bears flowers and fruits. (231)

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**ASCERTAINMENT OF THE PRICES AND
GROWTH OF THINGS**

अथान्नादिनिष्पत्तिज्ञानम् ।

फलकुसुमपत्रवृद्धिं वनस्पतीनां विलोक विज्ञेयम् ।

मुलभत्वं द्रव्याणां निष्पत्तिश्चापि सस्यानाम् ॥२३२॥

One should do well to ascertain the cheapness of things as well as the growth of corns through observation of the growth of leaves and flowers and fruits of trees. (232)

न्यग्रेधेन तु यवकास्तिन्दुकवृद्धत्या च षष्टिको भवति ।

अश्वत्थेन ज्ञेया निष्पत्तिः सर्वसस्यानान् ॥२३३॥

One should predict the abundance of barley on seeing the luxurious growth of the leaves and flowers and fruits of Banyan trees, of that of Sālī rice through similar growth in Tinduka trees, and of all kinds of crops through similar growth in Asvattha. (233)

जम्बूभिः स्थलमाषाः शिरीषवृद्धत्या च मुद्गनिष्पत्तिः ।

गोधूमाश्च मधूकैर्यववृद्धिः सप्तपर्णेन ॥२३४॥

One should do well to predict the growth of Masha from the abundance of leaves, flowers and fruits of Jambū tree or Mudga from abundance (of leaves flowers and fruits) of Hastikarna tree, of horses from that of Aśvakarna, of cows from Pātālā trees, and of goats from plantain trees. (234)

करिणश्च हस्तिकर्णैर्निर्देश्या वाजीनोश्वकर्णेन ।

गावश्च पाटलाभिः कदलीभिरजाविकं भवति ॥२३५॥

Growth of leaves, flowers and fruits in Mango trees indicates the prosperity of a country, that of Bhallātaka trees indicates various causes of fear, that of Pīlu tree indicates relief from diseases,

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and that of Khadira and Sami trees forebodes famine, and that of Arjuna tree abundance of good rain. (235)

आम्रैः क्षेमं भल्लातकैर्भयं पीलुभिस्तथारोग्यम् ।

खदिरशमीभ्यां दुर्भिक्षमर्जुनैः शोभना वृष्टिः ॥२३६॥

Abundance of flowers of Fichumanda and Nāgakeśara trees indicates abundance of corns in a country; that of Kapittha means the chances of storm, that of Vetasa means fear of drought and that of Kūṭaja fear of diseases. (236)

पिचुमन्दनागकुसुमैः सुभिक्षमथ मारुतः कपित्थेन ।

निचुलेनावृष्टिभयं व्याधिभयं भवति कुटजेन ॥२३७॥

(एते नानावृक्षायुर्वेदशास्त्रेभ्यः ॥)

SL. NO.	SANSKRIT NAME	BOTANICAL NAME AND FAMILY	ENGLISH	KANNADA	TAMIL	TELUGU	MALAYALAM
1	Airavata	Citrus Sps. (Rutaceae)	Orange	Kittale	Sathagudi, Chini	Battavinarinja	
2	Amlavetas Ajjukam Maruvaka Manjariki Akanda	or Citrus yetilulata. Ocimum basilicum (Labiatae or lamiaceae) Aalotropis gigantea (Asclepiadaceae)		Kama Kasturi	Karpuratulasi	Bhutulasi Rudrajada	
4	Alabu	Cucurbita Maxima	Pumpkin	Kumbalakai			
5	Alagium Shoedhanam Ankota	Alangium lamarki (Alangeiaceae) Alangium salvifolium	Sage leaved Alangium	Ankoelae Mara	Ahangi	Ankolame	Chemmmaram
6	Aluka	Solanum tuberosum (Solanaceae)	Potato	Alu Batate	Uralakijangu	Bangaladumpa	Urulonkizhangu
7	Amalaka Amalaki Dhatri	Embolica Officinalis (Euphorbiaceae)	Indian Gooseberry	Nalli Nelli	Nelikkai	Amalakamu	Amalakam
8	Amra, Cuta Amra chuta	Mangifera Indica (Anacardiaceae)	Mango	Mavu	Manga Mau	Mamidi, mavi	Amram, Cutam Mavu
9	Amratarka	Spondias mangifera (Anacardiaceae)	Wild mango Hog-plum	Amate Kada amte	Kotamara Kotamara	Adavi mamidi	Kaatamboleam Mamupuli

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10	Andrapogon Lamajjaka	Andropogon Jwarancusa (Gramineae or poaceae) Recent Name: Cymbopogon Jwarancusa					
11	Apamarga	Achyranthes aspera (Amaranthaceae)	Prickly Chaff flower	Uttarani	Nayurivi	Uttarani	Katalati
12	Aragvada Suvoshaka	Cassia fistula (Calsalpineae)	Indian Laburnum	Kakke	Konrei	Rela	
13	Ardraka	Zingiber Officinate (Zingiberaceae)	Ginger	Hasi shunti	Aallam. tnji		Andrakam
14	Areca	Areca Catechu (Palmae or Arecaceae)	Arecanut	Adke Adaike	Pakku		Adakka
15	Arista Nimba	Melia Azadirachta (Meliaceae)	Persianlilac Bead Tree	Bevu Neema	Malavembu	Turakavepu	Karinvembu Simaveppu
16	Arjuna, Kakubha	Terminalia arjuna (combretaceae)		Arjuna Torematti Holematti	Vellamatta	Yeramaddi	
17	Arka	Calotropis gigantea (Asclepiaduceye)		Ekka, Ekki Rui			
18	Asana	Terminalia tomentosa (combretaceae) Recent Name: Terminalia alatu		Sadada	Karramarda	Tani	
19	Asmantaka	Bryophyllum calycinum (crassulaceae) Recent: Bryophyllum Pinnatum	Sprout leaf Plant	Katu, basale Gayapatha		Simajamudu	

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20	Ashoka Nilasoka Raktasoka Asphota	Saraca indica (caesalpineae)	Ashoka	Kusge Rakta Pallava Kenkali Kadumallige Nagamallige Vishamallige Aswattha Arali	Asogam	Asoka Kankeli Vanjulamu Adavimalli Chirumalli	Asokam Hemapushpam Vanjulam Kathumalliga
21		Jasminum angustifolium (oleaceae)	Wild Jasmina				
22	Assatto Asvattha	Ficus religiosa (urticaceae)	Peepal		Arasu Aswatham	Ashvatham Bodhi	Arachu Arayal Asvatham Maraniaram
23	Asvakarna	Shorea robusta (Dipterocarpaceae)	Sal tree	Sala, Kabba		Omgal Guggilamu	
24	Atasi	Linum Usitatissimum (Linaceae)	Linseed Agasi	Alivirai	Avisi		
25	Ativala	Sidharthombifolia vari retusa (Malvaceae)		Sahadevi Atibela Bennegaruga Malati Sumana Madhavilatha Madhavi Vaisanataaduti Atibaze Ativisa Jali	Chitramutti Sirramutti	Atibalachettu gubatasa	Ankuranthotti Vathuram
26	Atimulaka	Aganosma caryophyllum (Apocynaceae) Hiptage benghalensis (Malpighiaceae)					
27	Ativisa	Acontium heterophyllum (Ranunculaceae) Acacia arabica (Mimosae)	Atis Root		Madavi Vasanda galamalligai	Madavitige Vadhayerala	Sitampur
28	Babbula				Karuvela	Nailatamma	Karivelam

29	Bandhujiva Arkavallahha	Pentapetes phoenicea (sterculiaceae) Ixora coccinea (Rubiaceae)	Scarlet Ixora Banyan Tree	Dupari Bandure Goravi Patakali Bakora Ala	Makina chettu
30	Banyan (vata) Bahuladu Barley Yava	Ficus bengalensis (moraceae) Hordeum Vulgare (Gramineae) Termination bellerica (Combretaceae)	Banyan Tree	Chetti Kullai Vedchi al Alam	Koranam Mankana Mari Peddmarri Barlibiyam Yavaka Tani Thani
31	Bahira Bibhithaka Bayeda	Begonia Cordifolia (Begoniaceae) Piper betel (piperaceae) Areca Catechu (Palmae)	Barley Bellie Myrobalan	Jave Godhi Barley Akki Tare	Tamalapaku Vakka Adakka
32	Begonia Betel Nagavalli Poogonhalam (Betel nut) Gubakar	Semecarpus anacardium (Anacardiaceae)	The Elephant Ear plant Betel leaf Betelnut Palm	Anekivi Huvu Veelyada Ele Adike Supan	Vettila Vakku Shen Kottei Erimugi
33	Bhalla Bhalla		Marking nut Tree or on- ental cashew	Godduguru Karigeru	Bhalla Jidi
34					
35					
36					

37	Bharangi	Clerodendron serratum (Verbenaceae)		Gantubarangi	Angaravalli	Gantu Barangi	Cherutekku Kankatharinni
38	Bignonia	Bignonia suaveolens (Bignoniaceae)	Trumpet flower	Amoghe Kachasthali			
39	Bilva	Aegle marmelos (Rutaceae)	Bilva	Bilva	Vilvam	Maredu	Vilvam
40	(Butea) Kimsuka Palasha	Butea frondosa (Papilionaceae)	Flame of the Forest	Bilvapatre Muttuga Muttala	Parasa	Moduga	Palas in Samatha
41	Cactus	Cactus sps (Cactaceae)		Kalligida Kallivarga			
42	Champak (Magnoliaceae)	Michelia Champaka	Champak	Sam pige	Shemburga Chambugam Kukkagodugu	Champakamu	Champakam
43	Chattra (Mushroom) (Kalakantala)	Agaricus campestris (Agaricaceae)	Mushroom	Nayikode Anabe			
44	Cinca cincini	Tamarindus indica (Cacsalpineae)	Tamarind	Hunise	Puli	Chintachette	Puli
45	Coconut Narikela	Theobroma cacao (Sterculiaceae)	Cocoa tree Chacholate tree	Hunase Kokogida	Amilam Makkacholam	Chintapandu Mokka-Janna	Amilam
46	Cordia Bahuvastika	Cordia dichotoma (Bonaginaceae)		Challe	Naruveli	Chinnanakkeru	Viricheruviri
47	Corn	Zea mays (Gramineae)	Indian Corn	Chelle kendala Musukina Jola Makka jola	Mukkacholam	Mokka-janna	

48	Cotton	Gossippium arboeum (Malvaceae)	Indian cotton	Hati	Paruthi Panji	Patti	Paruthi Panji
49	Dadima	Punica granatum (Old:Lythraceae New: Punicaceae)	Pomegranate	Dalimbe Dalia	Madulai	Danimma	Matalam
50	Dahlia	Dahlia variabilis (compositae or Asteraceae)		Nagadanti			
51	Danti	Baliospermum montanum (Euphorbiaceae)		Danti Kadu Haralu			
52	Darva	Poa Cynosuroides (Gramineae)					
53	Darbha Kusha	Desmostachya bipinnata (Gramineae)	Thatchgrass	Sannadarbehullu	Parbipul	Balbajamu Barhisan	Vidulam
54	Date - (Kasika)	or Imperata (cylindrica) Phoenix dactylifera (plamae)	Date-palm	Karjura - Uttatti	Perichchankay	Itta, Kharjuramu	Ittappazham Tenitta
55	Dhava	Anogeissus labifolia (Combretaceae)	Axlewood	Dindal	Vellaynaga	Chirimanu Yellamaddi	Marukinchiram
56	Kuluththa (Dolichaceae)	Dolichos biflorus (papilionatae)	Horsegram	Hurali	Kollu	Ulavalu	Muthva Muthera
57	Devadaru	Cedrus deodara (Pinaceae)	Deodar, Himalayan cedar	Devadaru			

58	Chanayasa Ajabhakshya Dusarsha	Fagonia arabiea (Zygophyllaceae)		Mullumaddu Dhamasa	Chittigara	
59	Dhanyaka	Coriander sativum (Umbelliferae) or (Apiaceae)	Coriander	Kottambari	Dhaniyalu	Kothumpalari
60	Draksa (Vine), Gostan (Vitaceae)	Vitis Vinifera	Grapvine	Chaniya Drakshi	Draksha	Mundinir Gostani
61	Dugdhika	Euphorbia hirta (Euphorbiaceae)		Acchegida, Nagarajuni Nen Akki soppu Attimara	Reddinanabrolu Bidarie	Nelapalai
62	Duonura Udumbara	Ficus glomerta (Moraceae)		Atti	Attibodda	Atti
63	Ebony	Diosphyros abenum (Efenaceae)	Ebony order	Valimara Tendu, Tumari Yelakki	Nallavalludud Karai Yelakyalu	Karu, vauari Nalluti, Tumiki Yelam
64	Ela Elabata Upakundaka	Alpinia Cardamomum or (Zingiberaceae)	Cardamum	Tumbi, Kaunkali Toospa Yelakkai		
65	Eranda, Hastikaraka	Ricinus Caommunis (Euphorbiaceae)	Castor	Aralenpe gida Harali	Amanakku Kottaimuthu	Amudamuchettu Avanakku
66	Gajapippali	Scindapsus Officialis (Araceae)		Dodda-hippali Gaja-hippali Shivani	Amattippili Gajapippallu Gumartek Gummadi	Amattippili Kumbil
67	Gambhari	Gmelina arforea (Verbenaceae)				

68	Garuda-vega	Dalbergia torta (Papilionatae)		Garulaveha			
69	Ghoma	Cyperus rotundus (Cyperaceae)	Nutgrass	Thunga Hullu	Korai	Tungmuste	
70	Girikarnika	Chitoria ternatea (Papilionatae)		Vishnukranthi Aparajithe			
71	Godhuma	Triticum aestivum (Gramineae)	Wheat	Godhi	Godumai	Godhumalu	Gendum, Godamba
72	Goksura	Tribulus terrestris (zygophyllaceae)	Land caltrops	Sannaneggilu	Nerunji	Chinnipalleru	Nerunji
73	Guduchi	Tinospora Cordifolia (Menispermaceae)	Puncture Vine	Amrutaballi	Nerjeeekai		Nereenjikai
74	Amritaguluchi	Saccharum Sara (Gramineae)	Gulancha	Kakattu, Thejanaka	Amudom Chindil	Tippateege	Amryti
75	Gunja	Abrus Precatorius (papilionatae)	Tinospora	Gulagangi	Gundurmani	Guruginia	Kunni
76	Rasagadhi	Balsamadendron mukul Commiphora mukul (Burseraceae)	Indian Liquorice Jegurity Indian Bedellium Tree	Guggule	Maishak shigukkal	Guggul	
77	Haliddi Haridra	Curcuma longa Curcuma domestica (zingiferaceae)	Turneric	Arishina Haladi	Manjal	Pasupu	
78	Amragadhar Haridra	Curcuma amada Curcuma Karpura (zingiferaceae)	Mango ginger	Mavina shunti	Mangal inji	Mannidiatham	

79	Haritaki Hassa Hingu Bathika Hintala	Terminalia chebula (Combretaceae) erula asafoetida (unifelliferae or Apiaceae) Phoenix Paludosa (palmae)	Chebulic Myrobalan	Alalaekai	Kadikkai	Karakkai	
80				Hingu Ingu	Perungayam	Inguva	Perungayam
81						Hintalamee	
82	Hiriveram, Bhutika	Andropogon Cynanthus Syn. Cymbopogon Schoenanthus (Gramineae)	Gingergrass	Majige Hullu	Suravayi		Shakanarupillu
83	Iksu	Saccharum Officinarum (Gramineae)	Sugarcane	Kabbu Pattikaffu	Poovan Karumbu	Cheruku	Karimfu
84	Indivara	Lilium candidum (liliaceae)	Water lily Blue lily				
85	Ingudi	Balanites aegyptiaca (Simarubaceae)			Nanjunda	Gari	
86	Irmeda	Acacia farnesiana (Mimosae)	Cassie flower	Kasturijali	Kadivel	Kasturituma	Arivelam
87	Jalanili (Green Algae)	Menters of Chlorophyceae	(Non-flowers plants)				
88	Jambaki	Eugenia Specis Syzygium Cumini (Myrtaceae)	Jaman Jambolan	Nerale	Neerdam, Naval	Neereedu	Nawal Perinnaral
89	Jambira (Hindi)	Citrus (Rutaceae)	Lemon	Black plum Nimbu Bijapurabijori	Periyavelumichai	Bijapuram	

90	Jambu Jambuka Japa/Jaba Rudrapushpam Jatee	Eugenia jambos (Myrtaceae) Hibiscus rosa-sinensis (malvaceae) Jasminum grandiflorum (oleaceae) Jasminum Officinale) Barleria cristata (Acanthaceae) Myristica fragrans (thristicaceae) Dendrobium (orchideaceae) Desmotrichum jimbriatum - jivanti (orchidaceae) Zizyphyns jujuba (Rhamnaceae) Cardiospermum halicacabum (Sapindaceae) Cedrela toona (Meliaceae) Arun Sps. Xanthosoma nigrum	Rose-Apple Chinarose White Jasmine Nutmeg	Pannerala Dasavala Chameli Sannajaji Mallige Spatikadahum Jajikayi	Perunaval Semparuthi Manmadafanam Mullai Jajikayi	Jambunereedu Javapushpamu Dasana Jaji Malathi Jajikayi	Jambuvam Chembarathi Pichakam Pichakamulla Jajikayi Jajikayi Elentha Buddakakara Nandichetty Malavveppu Palchembi
91							
92							
93	Jati						
94	Jatipatri Jatiphola Jivanti						
95							
96	Jujube						
97	(a) Jyotishmati Karnaphola (b) Jyotishmati Kachharo Kacvi						
98							
99							

100	Kadali	(Araceae) Musa Paradisica	Banana	Bale, Kela	Vazhai	Arati, anati	Vazha
101	Kadamba	(Musaceae) Anthocephalus Cadamba or Anthocephalus indicus		Kadamba	Vellai - cadamba	Kadambamu	Attutek
102	Kakodumvara	Ficus hispida (Moraceae)		Kada atti Kaneya atti	Peyathi Sonatti	Badamamidi Brammudi	Erumanakku
103	Kalama - sali	Oryza sativa - a (gramineae) variety	Paddy	Akki	Nellu	Vadlu	Nellu
104	Kalhara	Ottelai olismoides (Hydrocharitaceae)	Rice	Bhatta Hasiru Neeru Patre	Arisi	Biyyamu Nir-Veneki	Ari
105	Kamala, Kokamala		Nelumbo nucifera	Lotus	Tavare	Ambal	Kalung
106	Kamalini	(Nymphaeaceae) Mallotus Phillipinensis			Thamarai	Erratamara	Thamara
107	Rampilla	(Euphorbiaceae) Bauhinia Variegata	Kumkum Tree	Kumkuma	Kapil	Kunkuma	Manjana
108	Kancana	(Caesalpiniaceae) Solanum indicum		Kanchavala	Kungumam Segapumanchori	Sinduri	Kuramadakku
109	Kantaka	(Solanaceae) Solanum Xanthocarpum	Prison Berry		Mulli	Tella mulaka	Chuvanna
110	Kanthala	(Moraceae) Artocarpus integrifolia	Yellow Berried Night shade		Karimulli Kandonkattiri	Kakamunchi Pinnamulaka	Mandaram
110	Panasa	A heterophylla	Jackfruit Tree	Halasu	Pilapalam	Nelamulaka Venkauda Panasa	Chunda Kandankattiri Chakka

111	Kapitham	Feronia elephantum (Rutaceae)	Bale Woodapple	Bela	Vilanga	Velaga	Vila Vilatti
112	Karamarda Karanja	Feronia limonia Pongamia glabra (papilionatae)	Honge Indian Beech	Honge	Ponga Pongam	Gaanuga	Pungu Punnu
113	Karachi	Harwilliabinata (Caesalpiniaceae)	Anjan	Anjaner Kamara	Achacalam	Yepi, Epe, Naraepe	
114	Karavalli	Momordica charantia (Cucurbitaceae)	Bittergourd	Hagalakayi	Pakal		Kaippa Kaippavalli
115	Karavira	Nerium Odoratum Syn. Nerium indicum (Apocynaceae)	Carilla Fruit Indian Oleander	Kanagile	Pavakka Arali	Ganneru Kastooripattelu	
116	Karira	Capparis aphylla (Capparidaceae)		Shiprigida Kariuppi	Sengam	Kariramu	
117	Karkandhu Srigalakoli	Zizyphusoechoplia (Rhamnaceae)	Jackal Jujupe	Sollimullu Paragikanti	Ambulam Suraimullu	Banka Paroogi, paringi	Kottavalli Tutalimullu Chinnapparatti
118	Karnikara	Hibiscus mutabilis (Malvaceae)	Cotton Rose Confederate Rose	Bettada -Tavare	Sembarattai		
119	Karpnraka	Cinnamomum Comphora (Lauraceae)		Karpura	Karpurammu	Karppuram	
120	Kasha	Sacchasum Spontanum (Gramineae)					
121	Kataka Nirmali	Strychnos Potatorum (Loganiaceae)	Clearing Nut tree	Chilu Chilladabeeja	Tetak kotai Teltrain	Indupache Chillachettu	Tetranporai

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122	Katukarohimi Katuka	Picrothiza Kurroa (Serophulariaceae)	Bullet wood	Katukargani	Katukarogani	Katukarogani
123	Kesara Bakula	Mimosops Elengi (Sapotaceae)		Pagademara	Vagulam Magadam Tazhai, Thalay	Pogada Elngi Ilanni
124	Ketaki	Pandanus tectorius (Pandanaceae)	Screw Pine	Kedage Tale Huv	Mugali Ketaki	Kaida, Tala
125	Khadira	Padratissimum				
126	Kharijoora	Acacia catechu (Mimosaceae)	Khair	Koghi	Sandra	
127	Kimsuka	Phoenix dactylifera (Palmae)	Datepalm	Kachimamara Kharjura Uttati	Karnagalli Karchuram	Iba, Kharjuramu Happzham Tenitta
128	Kodrava	Butea frondosa (B.monosperma)	Flame of the Forest	Muthuga	Parasa	Palas in Samatha Varagu
129	Kosataka Devadalika	Paspalum Scorbiculatum (Gramineae)	Kodomillet	Haraka	Varagu	Arikalu Allu, Arugu
130	Kovidara Khairwal	Luffa echinata (Cucurbitaceae)		Visha Heera Jeemoothaka Sarul	Mandari	Chuvanna Mandaram
131	Ksira	Bauhinia Purpurea (ceesalpineae)				
132	Ksirika Keshara	Ficus Sps. (Monaceae)				
133	Kumuda	Crocus Sativns (Iridaceae)	Saffron	Kesari	Kungumapu	Kunkumapuvu
		Nymphaea alba (Nymphaeaceae)	Water Lily White Lotus	Bili Tavare		

134	Kurantaka	Barleria Prioritis (Acanthaceae)		Mullujaji Mullumandaragi Spatikada Huvu	Shemmuli	Mullugoranta	Shemuli
135	Kuruvaka Kinkinta	Barleria Cristatar (Acanthaceae)					
136	Kuruvinda	Phaseolus mungo (Vignamungo) Variety Roxburghic (papilionatae)	Blackgram	Uddu	Ulundu	Minumulu	Uzhunnu
137	Kusa	Poa sinuroides (gramineae)			Kollukattai	Kusa	
138	Kusmanda	Cucurbita Pepo Syn. Benincasahispida (Cucurbitaceae)	Field Pumpkin	Sorekai	Suraikayi		
139	Kustha Kemuka	Costus Speciosus (Zingiferaceae)		Kuldige Kemuka Kusambi	Kuiravam	Chengalvakoshtu	
140	Kusumama Kudapa	Schleichera trijuga (Sapindaceae)	Bower		Puvathipuvam Kodalipulusu	Posuka	Puvam
141	Kusumtha	Corthamus tinctorius (compositae or Asteraceae)	Sagadekendala Safflower	Kusume	Sendurakam	Kushumba	
142	Kutaja	Holarrhena Antidysenterica (Apocynaceae)		Setha Kutaja Vatehuli	Veppalei Kodagapalei	Palaa Kodaga Kammaregu	Kodagapala
143	a) Lakuca b) Mandaga	Artocarpus lakucha (Moraceae) or Monkey Jak or Lakuch Erythrina indiea		Alavana	Kaliyanamurukku	Badisa	Kalayana

144	Lasuna	(Papilionatae) Allium sativum (Liliaceae)	Garlic	Harivana Bellulli Balluli	Vellaipundu	Baridamu Velluti	-murikku Velluli
145	Linseed or Agase	Linum Usitatissimum (Linaceae)	Linseed -Flax	Seeme Agase	Alivitrai	Avisi	
146	Langali	Gloriosa Superba (Liliaceae)	Malabar -Glorylily	Agrusikhe	Kalaippaak -Kishangee Kirambu	Adavinabhi Ganjeri Lavangamulu	Medoni Malluttamara Karayampu
147	Lavanga	Syzygium aromaticum (Myrtaceae)	Clove	Lavanga			
148	Lodhra Marjaha	Symplocos racemosa (Symplocaceae)		Balaaloddu Oginamara	Velli-lethi	Lodduga	Pachotti
149	Madyantika Mallika	Jasminum Sambac (Oleaceae)	Arabian Jasmine or Inscan Jasmine	Elusuttu Mallige Sujimallige	Adukkumalli	Boddumalle Gundumalle	Cherupichakam
150	Madhavi	Hiptage madabloti (Malpighiaceae)		Madhavi latha Madhu malathi	Madhavi	Madhavi Tige	Siitampu
151	Madhuka	Hiptage benghalensis See 25 (b) Madhuka longifolia (Sapotaceae)	South India	Hippe Mahua,	Illupe	Ippa Elupaa	Poonam Ilupa
152	Manjishtha	Rubia Cordifolia (Rubiaceae)	Mawabutter Tree Indian Madder	Siomalathe Siragatti	Shevelli Manjitti Tinnirupachai	Taamaravalli Bhutulasi	Poont Manjetti
153	Maruvaka	Ocimum basilicum (Laboratae or Lamaceae)	Sweet Basil Common Basil	Naayi Tulasi Kamakasthuri			

154	Masha See 136 (Vigna mungo)	Phaseolus mungo (Papilionatae)	Blackgram	Uddu	Ulundu	Minumulu	Uzhnnu
155	Masaparha Masaharni	Glycine debilis Teramnnu labialis (Papilionatal)			(Kattualandu)		
156	Matulanga	Citrus medica (Rutaceae)	Citron	Madala Madavala	Kadarnarathai	Lungamu	Gilam, Rusakam
157	Methika	Trigonella foenum-raceum (papilionatae)	Fenugreek	Menthe Menthya Hesaru	Vendayam	Mentulu	Uluva Ventham Cherupayaru
158	Mudga Muga	Phaseolus radiotus (Papilionetae)	Greengram Goldengram		Pasipayasu	Uthulu, Patchapesalu Niyanda	
159	Murva	Sansevieria roxburghianae (liliaceae)	Indian Bowstring Hemp	Goddumanji	Marul, Mottaman		
160	Musakani	Merremia emarginata (convolvulaceae)			Elikathu keerai	Elika, jemudu	
161	Musta Mustaka	Cyperus rotundus (Cyperaceae)	Nutgrass	Tungegadde	Korai	Tungamusta	
162	Mustard (Surshaka)	Brassica nigra Syn.Brassica Campestris (Brassicaceae)	Black or True Mustard	Sasive variety	Siru-kadugu	Nallaavaalu	Katuka
163	Naga Kasa Naga Kuma	Mesua ferrea (Guttiferae)		Nagasampige Nagakesara Gajagakai	Nangu Nangal	Nagachampakumu	Nanga, Per
164	Naktamara	Caesalpinia bonducella	Fevernut or			Kazhichikay	Kazanchikuru

165	Nala	(Caesalpineae) C. Crista Phragmites maxima (Gramineae)	Bonducnut	Hulugilu	Perunanal	Nagasvaramu	Nalam, Nannana Ala, Vatam
166	Nigrodha Nyagrodha	Ficus bengalensis (Moraceae)	Banyan	Ala Aladamara Hole Halasu Ubatu	Al, Alam	Marri, Peddamarri	
167	Nipa	Naucllea Kadamba (Rubiaceae)		Kadu Nili	Kataveri	Karunili	
168	Nili Kalakutaka	Indigofera articulata (Papilionatae)	Surat Indigo Wild India Arabian Indigo Wild Turmeric				
169	Nisa	Curcuma aromatica (Zingiberaceae)		Vana Haridra Kasturi Arishina Lakkingida Nakkilu Nekki	Kasturi Manjal	Kasturi Pasupu	
170	Nirgundi Nirgunda	Vitex negundo (Verbenaceae)			Vellainocohi Nirkkundi	Vaavilu	Vellanocchi
171	Padmaka	Prunus Cerasoides (Rosaceae)	Himalayan Wilecherry Onion				
172	Palandu	Allium Cepa (Liliaceae)		Erulli Nerulli, Ullagadde	Vengayam	Nirulli Ulligaddalu	Chuvannaulli
173	Palasha	Butea frondosa (Papilionatae)	See s.l.No. 40				
174	Paravata	Annona reticulata (Annonaceae)	Bullocks Heart	Ramaphala			

175	Parijatha	Nyctanthes arbortristis (Oleaceae)	Night Jasmine	Parijatha Harasingara	Manjhapu	Pagadamalle Parijatham Kapilanagadustu Jana, Nallajana Phutiki	Pavizhamalli
176	Purusaka (Parooshaka)	Grewia asiatica (Tiliaceae)		Butiyudippe Tadasala	Palisa Tadachi		
177	Patala Patali	G.Subinaequalis Stereospermum Suaveolens (Bignoniaceae)		Hudayabilla	Padri	Gaddalipulusu Kalgora Kuferakshi Kommupotla	
178	Patola Putulika Patra	Trichosanthes dioica (Cucurbitaceae) Laurus cassia (lauraceae)	Pointed gourd	Kaadupadavala	Kombupudalai		Patolam
180	Patanga Kuchandana	Alenantha pavonia	Redwood	Anegylgani	Anikundumani	Bandiguruvenda Maniagi	
181	Pilakkho, Pippala	Plaksa (Moraceae)	Ficus religiosa	Peepal	Arali, Aswattha Aswattham	Arasu, Bodhi Ghunia, Varagogu	Ashwatham.
182	Pilu	Salvadora indica Salvadora persica (Salvadoraceae)	Toothbrush Tree or Mustard tree	Govinamara Gonimara	Kalawa, Karkol		
183	Pindara Pindira	Punica granatum (Punicaceae)	Pomegranate	Dalimbe	Madulai	Danimma	Matalam
184	Pippali	Piper longum	Indian	Hippali	Tippali	Pippuloo	Tippali

185	Asvakarna	(Piperaceal) Shorea sps	Long pepper	Tippali (See Sl.No.23)	Sirumulam	Pippalimagodhi
186	Piyala Privala	(Dipterocarpaceae) Buchanania Lanza	Almondette Tree Cheronjee	Huilmaralu Nurkal	Morala	Mungapera
187	Priyangu	(Anacardiaceae) Agalaia roxburghiana (Meliaceae)		Tottalakayimara Tottilamara		Matsakanda
188	Pterospermum (Kanakachampa)	Pterospermum acerifolium (Sterculiaceae)	Indian Kinotree	Honne	Vengai	Yegi, Peddagi Venga
188 (B)	Pitasara	Pterocarcus marsupium (Papilionatae)	Malabar Kino tree			
189	Punnaga	Calophyllum inophyllum (Guttiferae)	Alexabdrian Leurel or Pinnay Oil tree	Surahonne	Punnai, Pinnay	Pouna
190	Rajakosathaki	Luffa acutangula Variety; amara (Cucurbitaceal)	A variety of Ridgegourd or Riffedgourd	Kaduheere, Heerekai	Pirkankai	Birakaya
191	Rajani	Indigofera tinctoria (Papilionatae)	Common Indigo	Nili	Nili	Nilam
192	Rangapati Rasna	Pluchea lanceolata (Asteraceae) Leaves or Saccolabium- papillosum (orchibaceae)	Saccolabium	Papillosum	Orchilaceae	

193	Raktotpala	Nymphale rubra N.nouchali (Nymphaeaceae)	Indian Red Water Lily	Nyadale Huvu	Allitamarai Vellambal	Allitumara Tella Kalava	Periambal Neerambal
194	Rohitaka	Tecomella Undulata (Bignoniaceae)	Rohida Tree				
195	Saka	Tectona grandis (verbenaceae)	Teak	Thega			
196	Sala	Shorea robusta (Dipterocarpaceae)	Sal	Kabba	Kungiliyam	Gugai	Maramaram
197	Asvakarna Sallaki	Boswellai Serrata (Burseraceae)	Indian Olibanum Tree	Lobana	Parangisambrani	Guggilamu Parangisambrani	Parangisambrani
198	Salmali	Bombax malabaricum (Bombaceae)	Red silk Cotton Tree	Booraga	Mulivilavu	Booruga	Mullilavie
199	Sami	Prosoopis Spigera (Mimosae) P.Cineraria		Kabanni Perumbe	Perumbay Jambu	Jammichettu	Parampu
200	Sana	Crotalaria juncea (Papilionatae)	Sun-hemp	Senabu	Sannappu	Janamu	Wuckoonar
201	Sugandhika Chandan (Santal)	Santalum album (Santalaceae)	Sandalwood	Sreegandha	Sandanam Uloodam	Chandanamu	Chandanam
202	Sankhapu Sankhapu	Conscora decurrens C.deccusta (Gentianaceae)	Hemp	Shankha Pushpa			
203	Santana	Polythia longifolia (Annonaceae)	Indian Mast Tree	Putrajivi	Nettilingam	Naramamidi	Asanachorana

204	Sarala	Pinus roxburghii (Pinaceae)	Chirpine	Turpentine			
205	Sarva	Hemidesmus indicus (Asclepiadaceae)	Country Sarsaparilla	Gida	Nannari	Sugandhipala	Naruminti
206	Sarsapa	Brassica Campestris BRapa (Brassicaceae)	Mustard	Sasive	Sasivelu		
207	Saugandhika	Plumeria alba (Apocynaceae)	White champa	Bili Deva	Perumalarali	Veyivaraahaalu	Vellachampakam
208	Sephalika	Nyctanthes arbotristis (Oleaceae)	Night Jasmine	Kanagalu			
209	Parijatha	Sesamum indicum (Pedaliaceae)	Coral Jasmine	Parijatha	Manihapu	Pagadamalle	Parizhamalli
210	Sesma (Ellu)		Gingelly	Ellu	Ellu	Parijathamu	Parijathakam
211	Simsapa	Dalbergia Sissoo (Papilionatae)	Sesame	Sissu, Mara	Sisuitti	Nugulu	Karuthellu
212	Sindhuvara	Vitex trifolia (Verbenaceae)	Sissu	Nochi		Errasissu	Iruvil
213	Surasa	Zingifer cossumunor (Zingiferaceae)	Wild ginger	Kadu Shunti	Nirnochi	Vaavilu	Karinochi
214	Signiveraka	Albizzia lebeck (Mimosae)	Siris	Begemara	Sirunochi	Chiruvaavili	Nirnochi
215	Sirisa		East Indian walnut		Vagei	Karraalliamu	Vaga
216	Shirisha					Dirasana	
217	Slesmanthaka	Cordia diachotoma (Boraginaceae)		Challe Hannina	See S.No.46		
218	Bathajatha	Acacia arabica (Mimosae)		-mara			
219	Sorivala			jali	SI.No.28		
220	Babbula						

216	Soma	Sarcostemma acidum (Asclepiadaceae)	Drumstick tree	Hambukalli		Kondapala	
217	Somavela	Moringa Oleifera (Moringaceae)	Horse Radish Tree	Somaltha	Murungai	Somalatha	Murinna
218	Sthalapadma	Hibiscus mutabilis (Malvaceae)	The changeable	Nuggekayi	See SI No. 118	Mulaga	Sigru
129	Karnikara	Mimosa Pudica (Mimosaceae)	Rose	Kempu	Tottalavadi	Munaga	
	Sukarika		Touch-me-not	Suryakanthi			Tintarmani
220	Suryavali	Gynandropsis Pentaphylla G. Gynandra (Capparidaceae)		Mutidare muni		Attrapatti	
221	Svarnapushpa	Cassia fistul (Caesalpineae)	Golden shower	Sreekala	Kattakodagu	Vaminta	Karavela
222	Syama	Echinochloa frumentacea (Poaceae)	Indian Laburnum	Tiloni		Vainter	Taiwela
223	Symalatha	Ichnocarpus frutroers (Apocynaceae)	Japanese	Kakke	Konnei	Rela	
	Sariva		Barnyard Millet	Samai	Kudraivalipillu	Bontashama	
224	a) Tagara	Ervatamia divaricater (Apocynaceae)	Indian valerian	Savai	Paravalli	Illukatte	Paalvally
	Nandivriksha	Or		Karehambu	Udargodi	Nalateage	
	b) Tagara	Valeriana Wallichii (Valerianaceae)		Gorwiballi			
	c) Tagara	Or		Nandyavarta			
		Bignomia Chelonoides					

225	Tala Tali	(Bignoniaceae) Borassus flabellifer (Palmae)	Palmyra Palm	Tale or Olegida	Panai	Tadichettu	Pana
226	Tamala	Cinnamomum tamala (Lauraceae)	India cassia Lignea		Talishappattiri	Talisapatri	
227	Tejapatra Tarkari	Aerchynomene sesban (Papilionetae)					
228	Trivrita (Trivrita)	Operaculina turpethum (Convolvulaceae)		Bill Tigade	Shivadai Kumfam	Tellategada	Chivaka Rochani
229	Twak	Cinnamomum Zeylanicum (Lauraceae)	Cinnamon	Dalchini	Cannalavanga -Pattai	Dalchini	
230	Tinduka Tinduki	Diospyros embryopteris (Ebenaceae) D.Peregrina	Gaubpersimmon	Holetupra	Kattatti Kavikottai	Tinduki Gobu	Panachi Vanaraji
231	Udumbala	Ficus glomerata (Moraceae)	See SI.No.62				
232	Usina Ushira, Vana	Vetivera Zizanioides (Graminae)	Vetiver Khus-Khus	Laamanche	Vettiver	Kusuveeru	Ramaccham
233	Vacha	Acorus calamus (Aroideae) (Araceae)	Sweet flag	Baje Bhutanadini Bore Hanninamara	Vasambu	Vasa	Vavambu
234	Vadari	Zizyphus Jujuba (Rhamnaceae)	Jujub Tree				
236	Vanahara Vanaharai	Curcuma aromatica (Zingiberaceae)	Wild Turmeric	Kasturi Yellow Zedoary	Kasturimanjal Arishina	Kasturi pasupu	

237	Vansha	Bambusa arundinacea (Gramineae)	Thorny Bamboo	Biduru	Mungil	Bonguveduru	Mungil
238	Vanira	Calamus roxburghii (Plamae) (Arecaceae)					
239	Vanijula	Calamus rotang (Plamae) (Arecaceae)	Ratancane	Halubetha	Perambu	Pemu	
240	Vetira	Pistia stratiotes (Araceae)	Water soldier	Nagabetha			
	Variparni		or water cabbage	Antaragange	Akasatamarai	Antharaidhaman	Akasatamarai
241	Vartaku	Solanum melongena (Solanaceae)	Egg-plant	Badanekayi			
242	Varuna	Crataeva nurvala (Capparidaceae)	Brinjal		Maralingam		
243	Vasaka	Adhatoda Vasica (Acanthaceae)		Adusoge	Adadodai	Adasaramu	Atolotakam
244	Vastuka	Chenopodium album (Chenopodiaceae)	Lamb's Quarters	Hicchu	Pasupukura		
245	Vetasa	Calamus Viminalis Syn. C. fasciculatus (Palmae)	Water reed	-Chakkota Neeruhabbe	Parambu	Pemu	Perambu
246	Vetula	Calamus Sps. (Palmae)					
247	Vidanga	Embellia ribes (Myrsinaceae)		Darakanhi	Vayuvilanga	Vayuvilanga	Vizhal
248	Vhati	Solanum indicum	Poison Berry	Kempugulla	Mulli	Tellamulaka	Cheruchunda

249	Vishamushti	(Solanaceae) Strychnos nux-vomica (Loganiaceae)	Snakewood Nux-vomica Strychninetree	Heggagida Hemmush Kanjira	Papparamulli Etti Kagodi	Kakamunchi Mushti Muchidi	Kanjiram
250	Breehi Vrihi	Oryza sativa (Gramineae)	Paddy	Batta	Nellu Arisi	Vadlu Biyamu	Nellur Ari
251	Yava	Hordeum Vulgare (Gramineae)	Barley	Javegodhi	See SI.No.31		
252	Yajnadamura	Fiens glomerata (Moraceae)		Atti	See SI.No.62		
253	Yavinkaa	Trachyspermum ammi (Umbelliferae or Apiaceae)	Carum, A. jowan	Oma, Omakki	Omum, Omam	Vaanu	Omam
254	Yasthimadhu	Glycyrrhiza glabra (leguminasae)	Liquorice Licorice	Atimadhura Durlava	Atimaduram	Yashtimadukam	Iratimaduram
255	Yavasa Yaveka	Alhagi maurorum	Mannaplant	Nelaingalasa		Girkarnika	
256	Sreemudhe Atibala	Abutilon indicum (malvaceae)	Country Mallow	Mudregida Sreemudra	Paniyarattutti	Tutturafenda	Vellus 311
257	Jivantika	Viscum articulatum (Viscaceae)					

The Kalpatharu Research Academy established in 1981, was inaugurated by the then Minister for Tourism and Civil Aviation, Government of India. This is an institution dedicated to the cause of the Preservation of heritage in India. Its broad aim is to promote research-oriented scholarship in the different branches of knowledge relating to the Vedas and Sanskrit. Encouragement is meant to be given through the Academy to the study of the Vedic literature along with traditional Angas, such as Jyotisha, Kalpa, Nirukta and Vyākaraṇa. It also promotes work in related disciplines; Manuscriptology, Etymology, Linguistic Sciences, Lexicology and Literary Criticism. Generally, the Academy will help spread and promote education, culture, science, art and learning in all its branches. It will be broad-based and multi disciplinary in approach.

In order to further its main objective to encourage studies in the field of Veda and Vedāṅga, various Research projects have been taken up and also major Research work on Rigveda and Āgama-Kośha in several volumes. A reference library is being built up to assist the research work by the scholars engaged by the Academy and also students in Vedic studies. It is the intention of the Academy to develop as a National Centre for higher learning in Vedas and facilitate the founding of a Sanskrit and Vedic University in India.

This publication is the Thirty Third of its achievements in this field.

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